

241300-54-T (Vol. III)

Appendix for  
P-3/UWB Flight  
Portage, Maine  
27-28 June 1995

Volume II

19990920 024



P.O. Box 134001  
Ann Arbor, MI 48113-4001

28 Jun 1995  
Tape: E1440

Post-line Data Sheet  
Line 25  
Mission: Presque Isle DAY 3

Time: 179:00:52:00  
Pass 16  
Req.# 13

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	10000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	9900 ft s.d.=	2 Swath Ctr Ang:	30.0°	30.0°	30.0°	30.0°
Slt. rng:	18460 ft	Tgt Dep Ang:	30.0°	30.0°	30.0°	30.0°
Look:	Right	St rng (ft):	16922	16922	16922	16922
Depr Ang:	25.0°	Near Rng Dep:	35.8°	35.8°	35.8°	35.8°
Des. trk:	30.0°	Far Rng Dep:	17.4°	17.4°	17.4°	17.4°
Start Sq:	90.0°	Atten (dB):	51.0	63.0	52.0	67.0
End Sq:	90.0°	RMS Video (%FS)	29.2	13.6	21.4	13.8

#### WAYPOINTS

Line_up:	N 46:30.71	W 68:44.60	Main Target:	IE
Start:	N 46:41.11	W 68:35.93	Mocomp Point:	
End:	N 46:49.77	W 68:28.66	Lat:	N 46:44.12
			Long:	W 68:28.98
From:	N 31:49.89	W 78:14.04	Tgt Trk:	0.0
To:	N 60:12.77	W 51:51.23	Tgt Vel:	0.0
			Alt:	770.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	->	10 sec
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)	
Swath width:	Single	Ave Gndspd:	Real	-> 250.7 kts
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4	
Position Reference:	ON	GPS Vel/Pos Reference		
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft	
Range Gate Delta:	0.0 ft	Range Tracking is	OFF	
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF	
TX Chirp Filename:	CTL1U2B	RX Chirp Filename:	CRL1N0A	
Ave Ref Vel ->	3.0 fps (s.d.=	9.8)		
Ave Fil Vel ->	3.2 fps (s.d.=	9.3)		

NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation: 0.0°	Starting: 5263 ft	(2)
L: -70.0	Azimuth: 0.0°	Ending: 6520 ft	(2)
C: -70.0	Pitch: 0.0°		
P: 39.7			

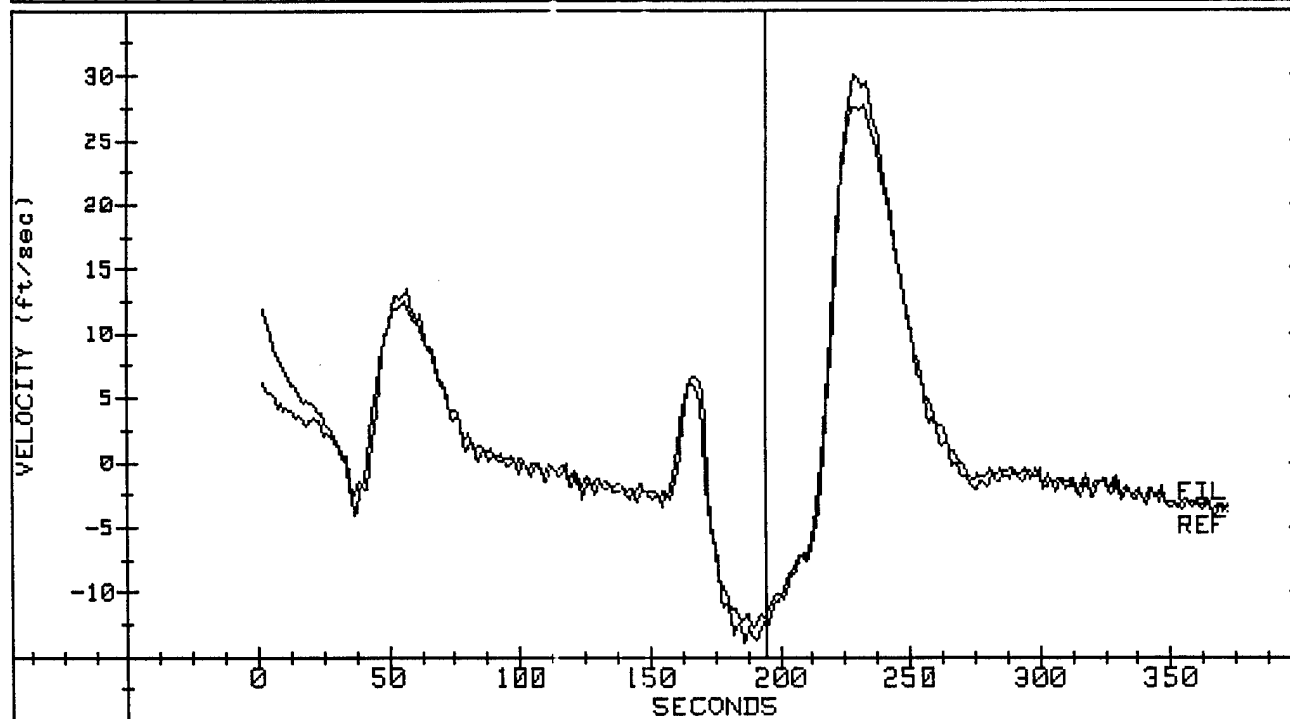
Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 1024.0	X: 63.8 dB	Start: 00:52:00
Y: -463.0	L: 63.8 dB	End: 00:54:41
Z: 6435.0	C: 63.8 dB	

#### Mocomp Counters

Start:	956073	000E96A9h	CPA (UCT):	00:00:00
End:	983072	000F0020h	Alt:	0 ft (GPS)
			Lat:	N 0:00:0
			Lon:	E 0:00:0

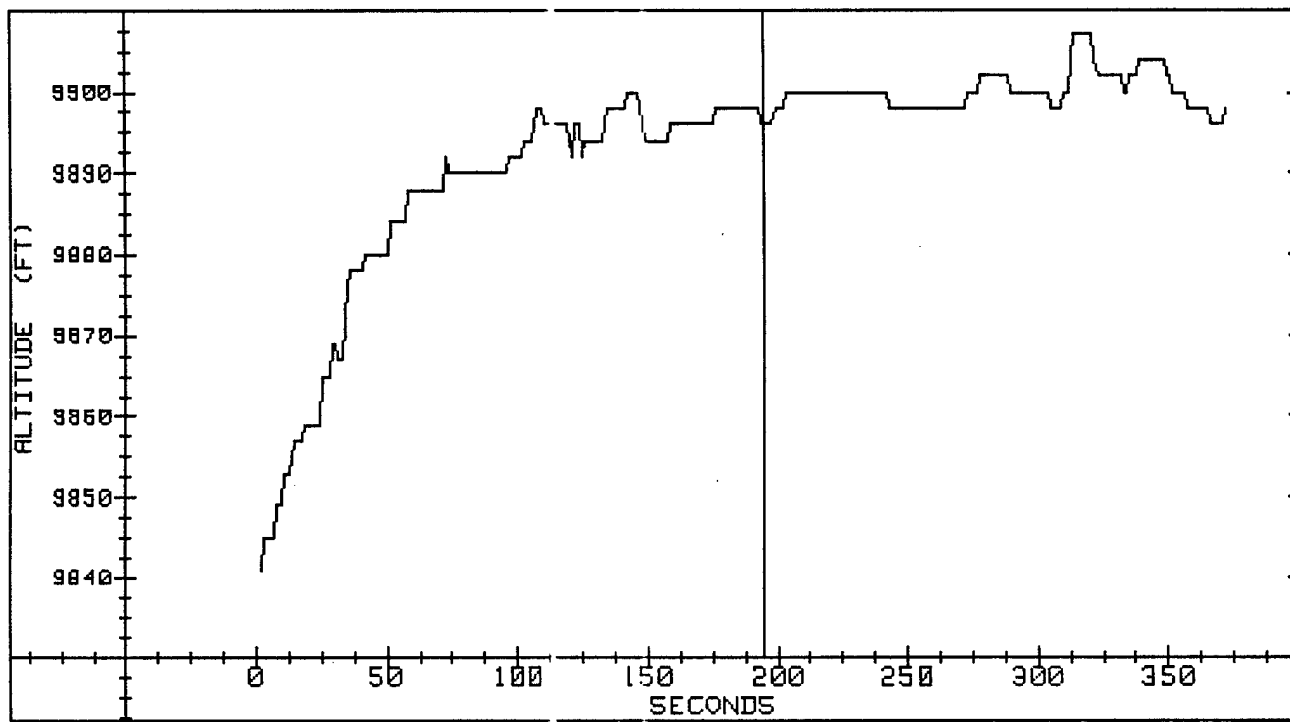
FILTERED vs. REF. VELOCITY  
DAY 179 TIME 0:48 PASS 16

INS  
LORAN  
GPS



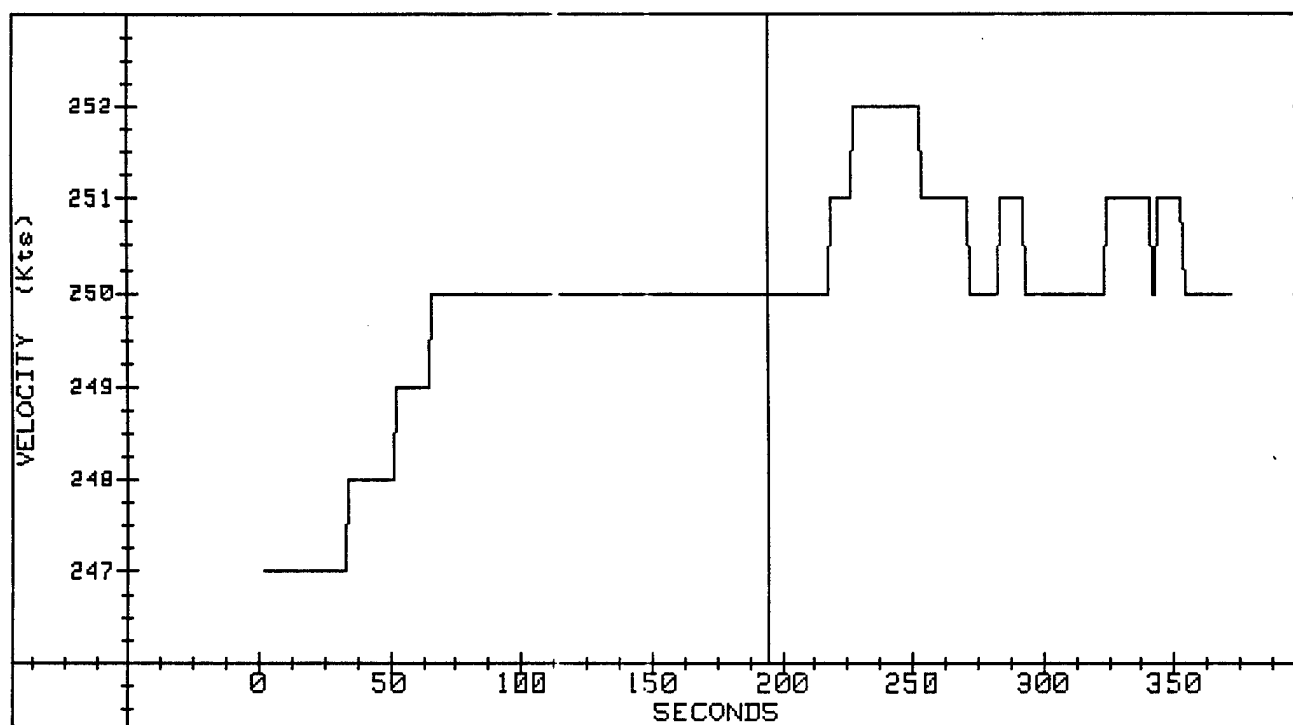
# BARO ALTITUDE

DAY 179 TIME 0:48 PASS 16 m= 9900, sd= 2.45021



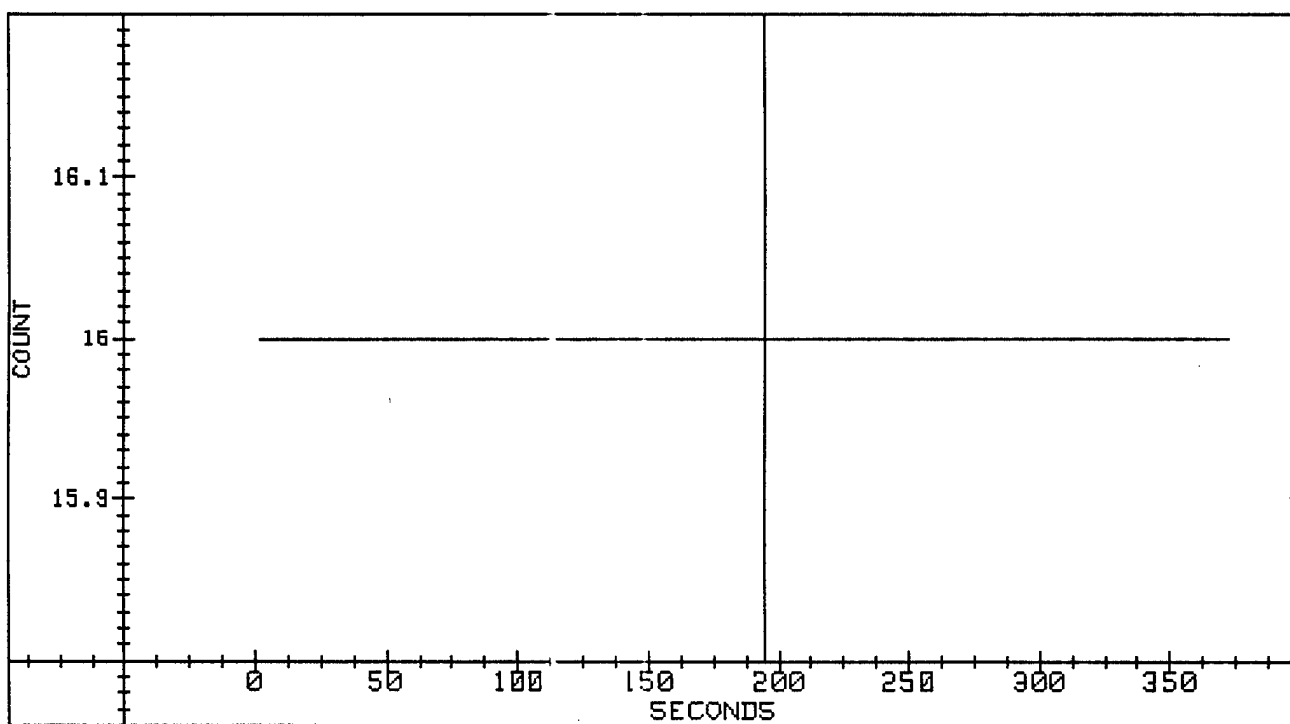
## INS GROUND SPEED

DRY 179 TIME 0:48 PASS 16 m= 250.7, sd= .724093



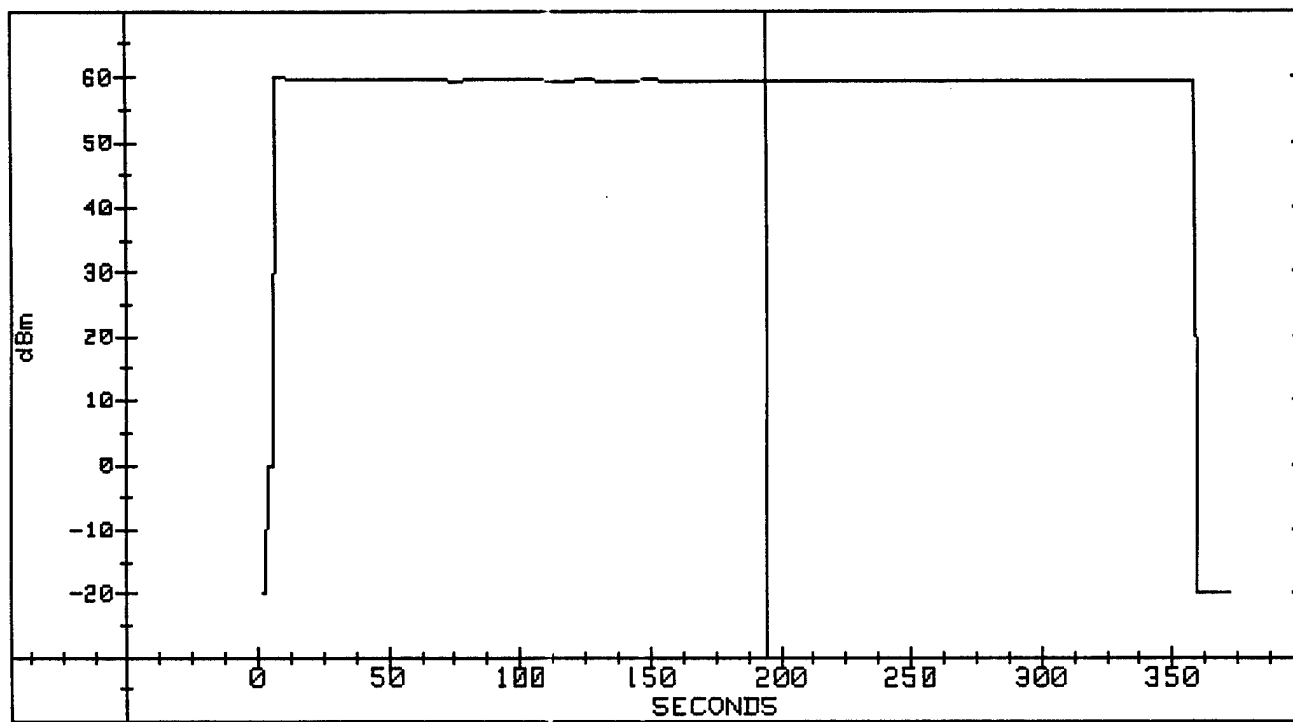
# PASS NUMBER

DAY 179 TIME 0:48 PASS 16 m= 16, sd= 0



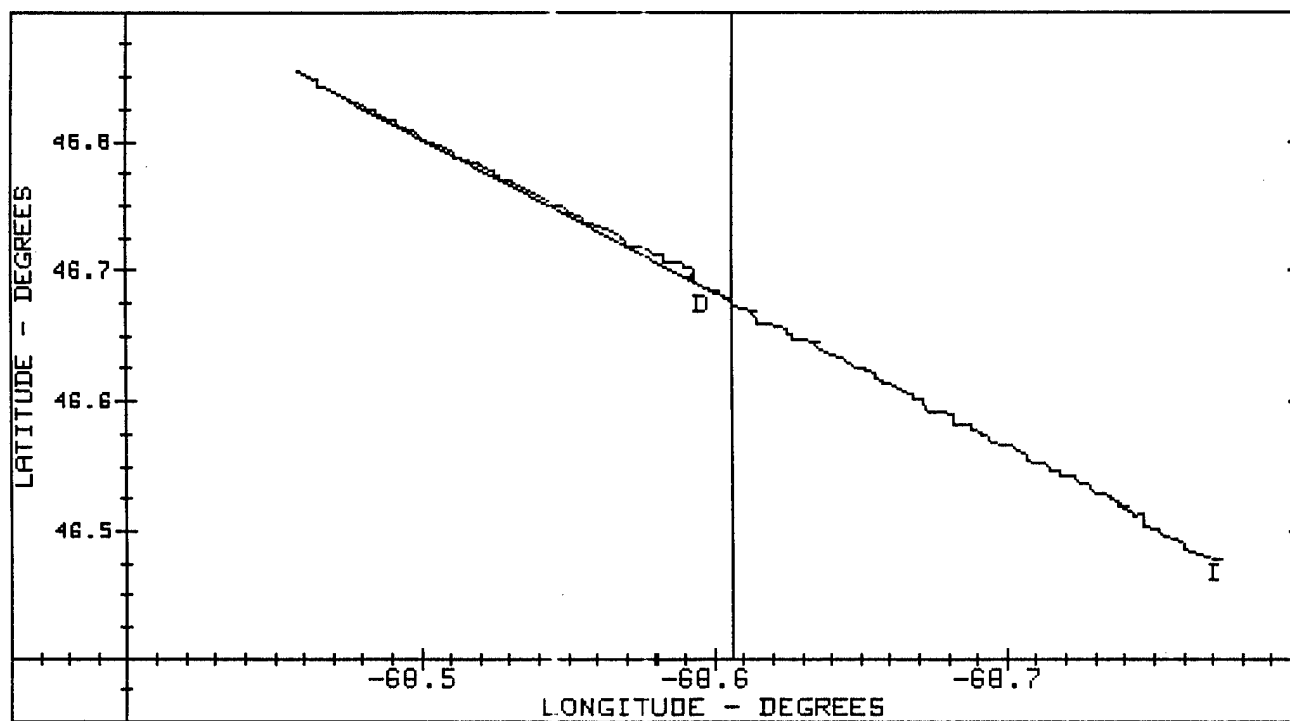
P Band Power

DAY 179 TIME 0:40 PASS 16 m= 52.5, sd= 22.2979



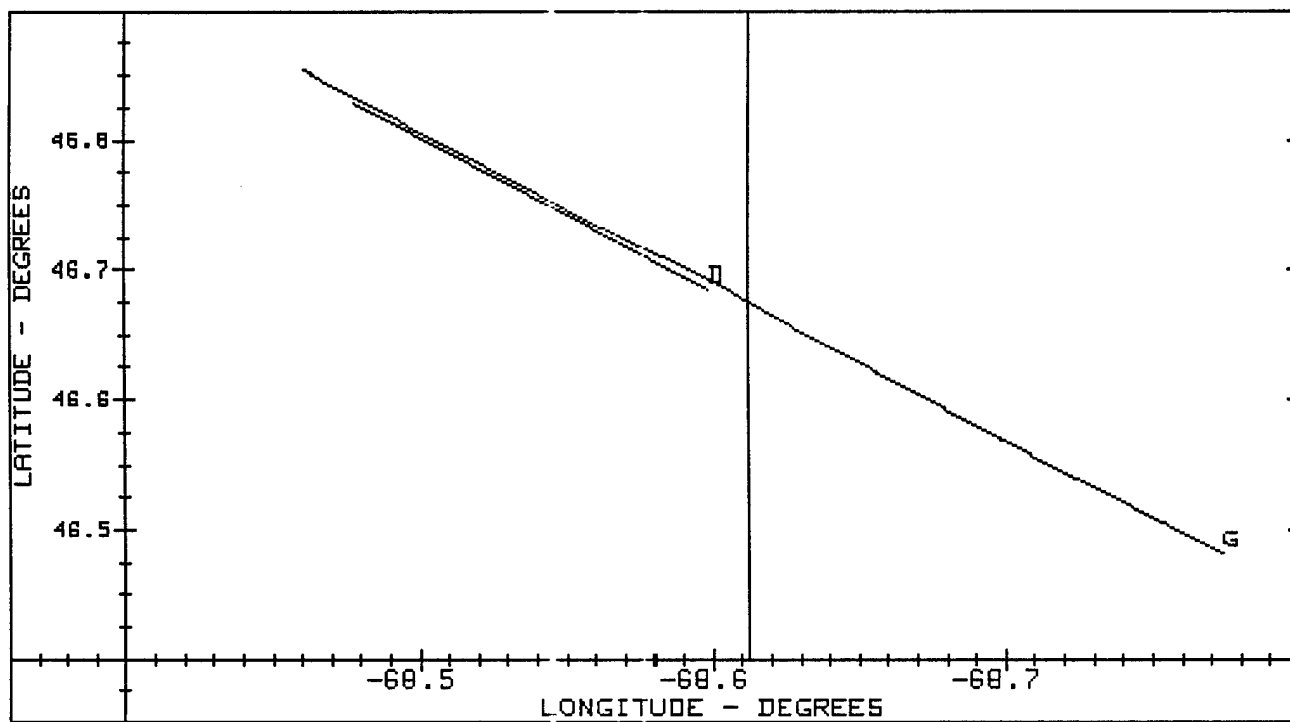
INS AIRCRAFT POSITION

DAY 179 TIME 0:48 PASS 16



GPS AIRCRAFT POSITION

DAY 179 TIME 0:48 PASS 16



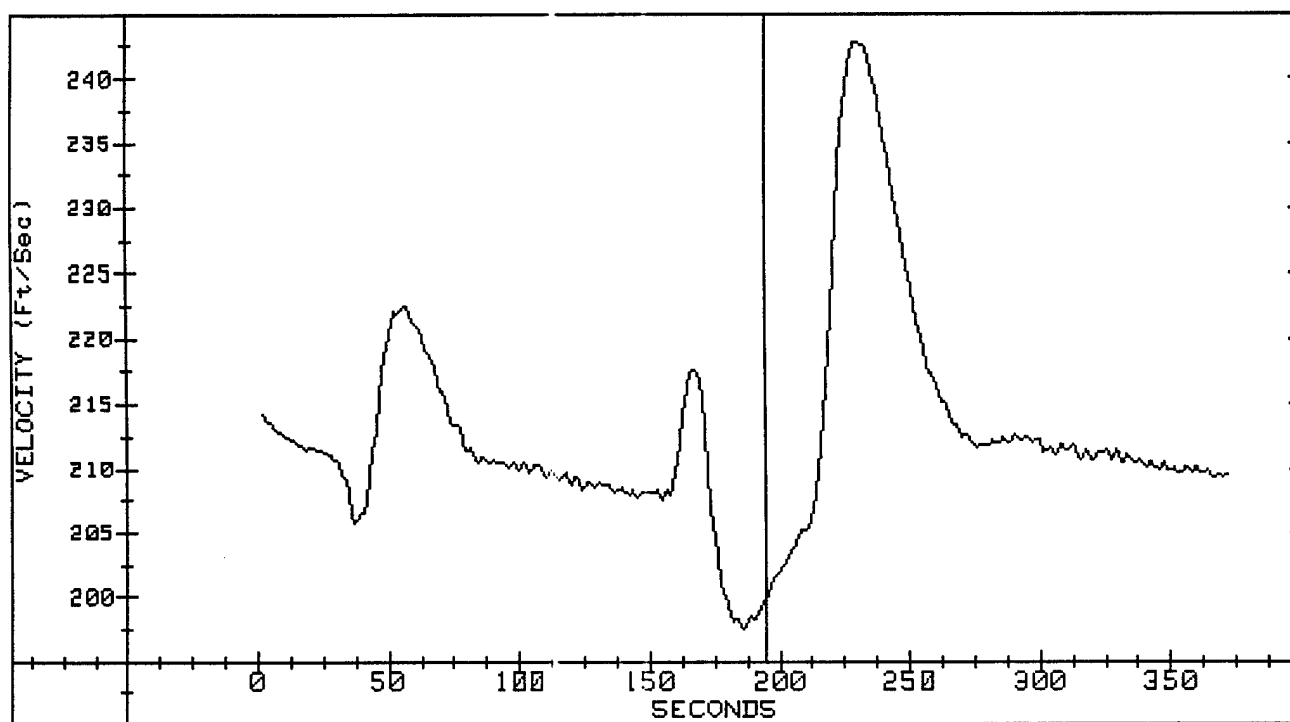
GPS V<sub>e</sub>

DAY 179

TIME 0:40

PASS 16

m= 216.4, sd= 9.84789



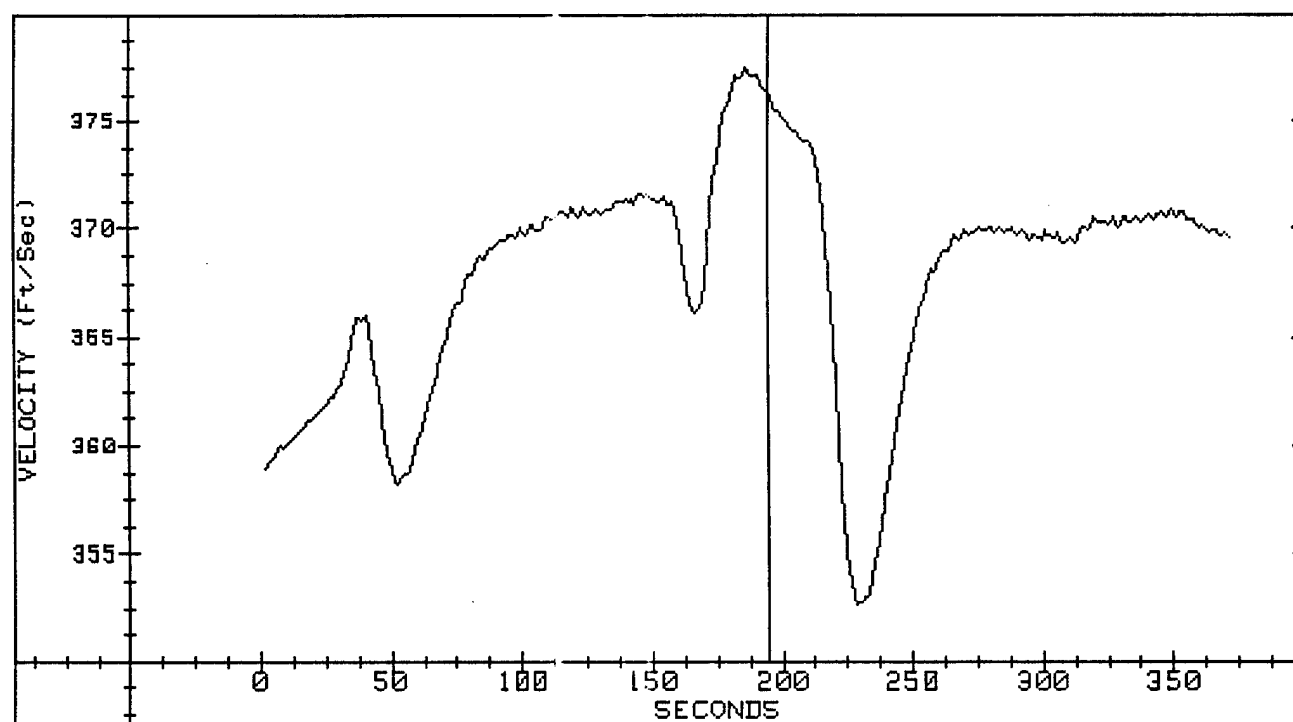
GPS Vn

DRY 179

TIME 0:40

PASS 16

m= 367.5, sd= 5.13413



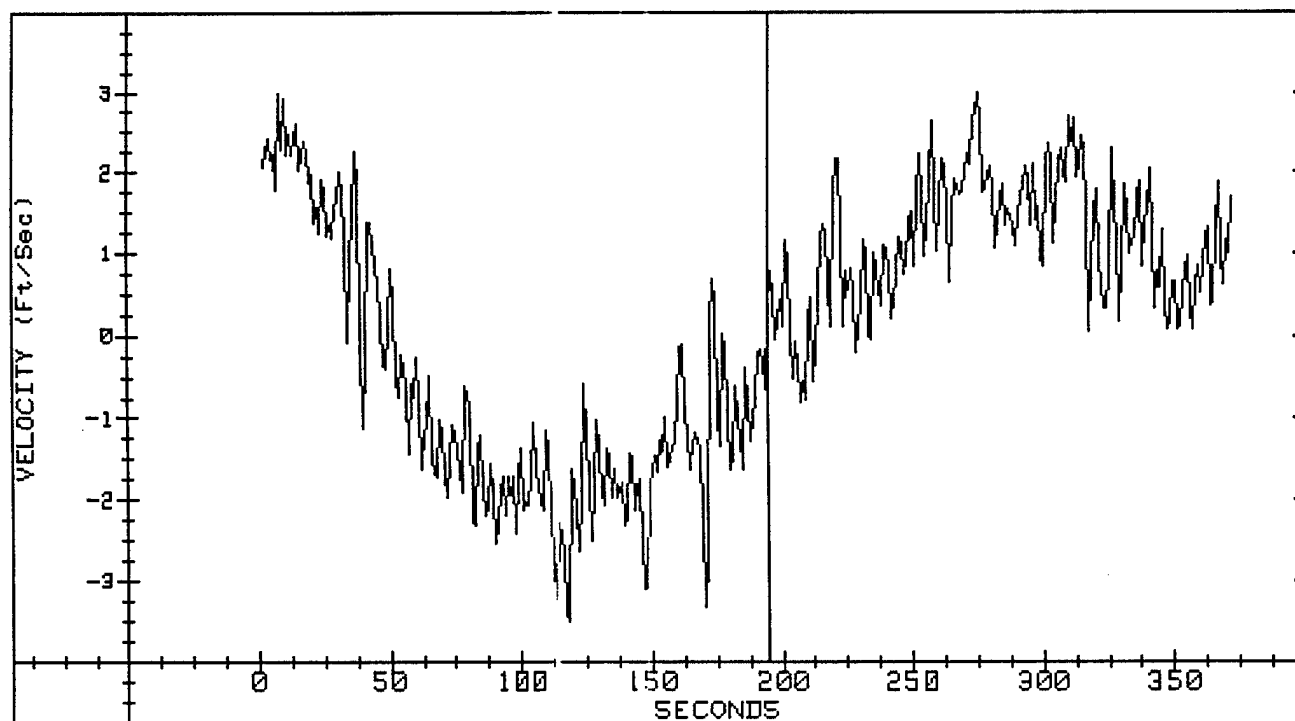
GPS Vv

DRY 179

TIME 0:40

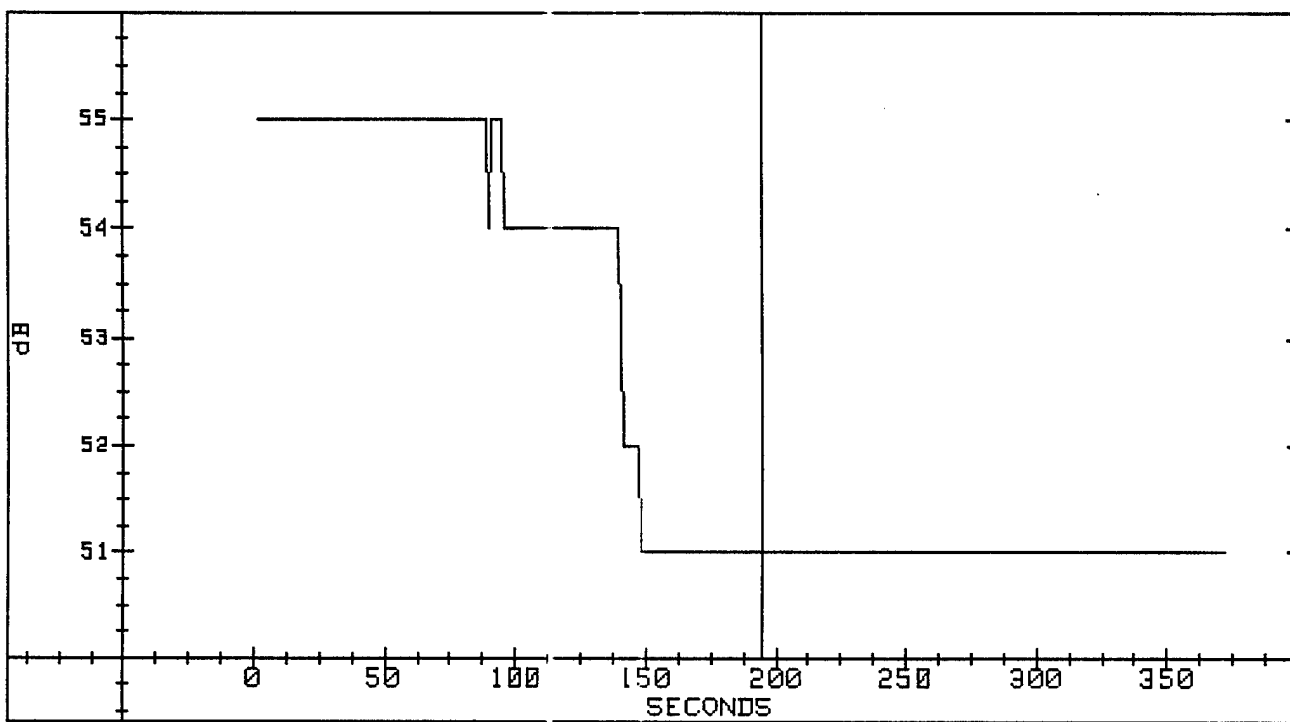
PASS 16

m= 1.263, sd= .721626



Ch1 RES Attenuation

DAY 179 TIME 0:40 PASS 16 m= 51, sd= 0



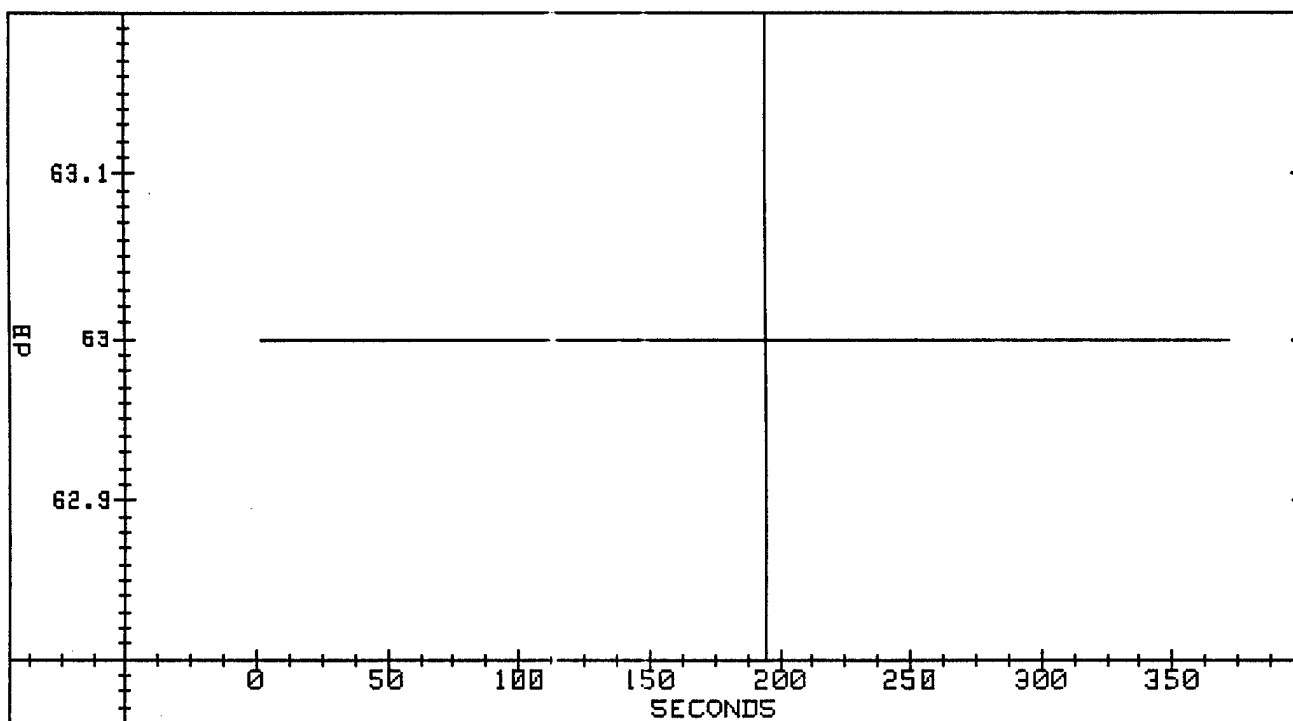
Ch2 RES Attenuation

DAY 179

TIME 0:40

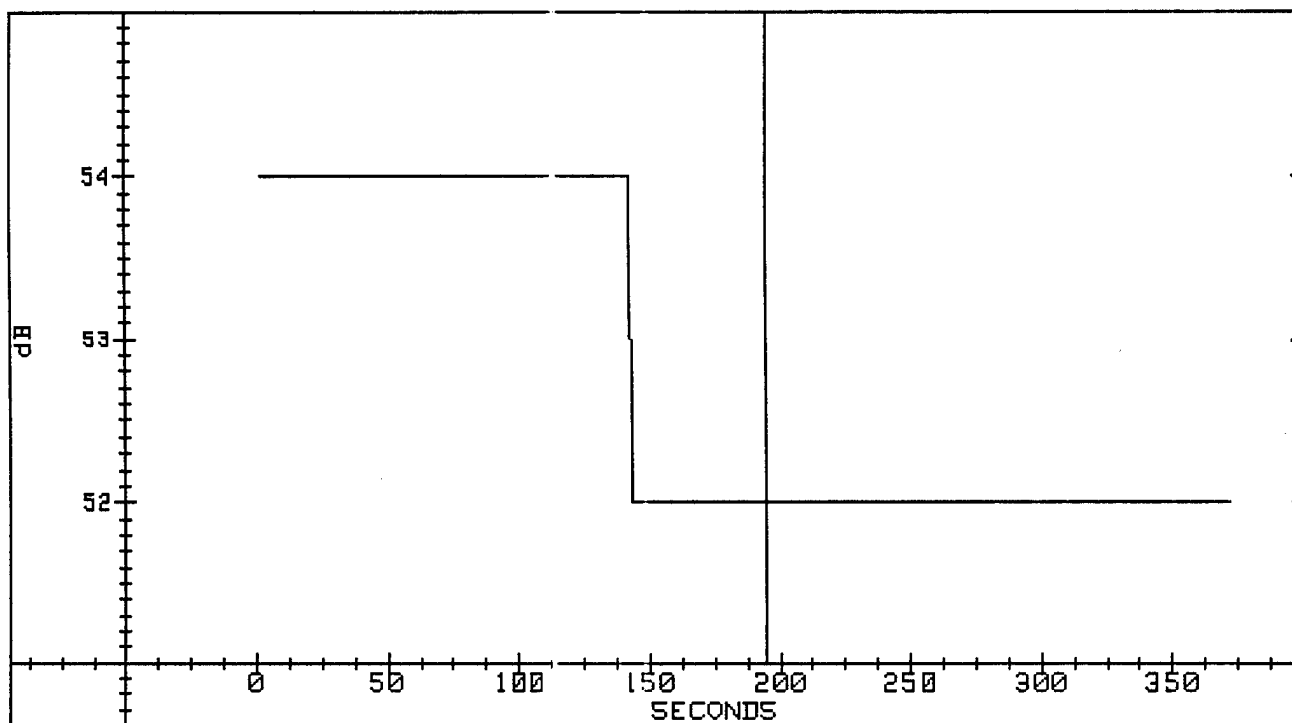
PASS 16

m= 63, sd= 0



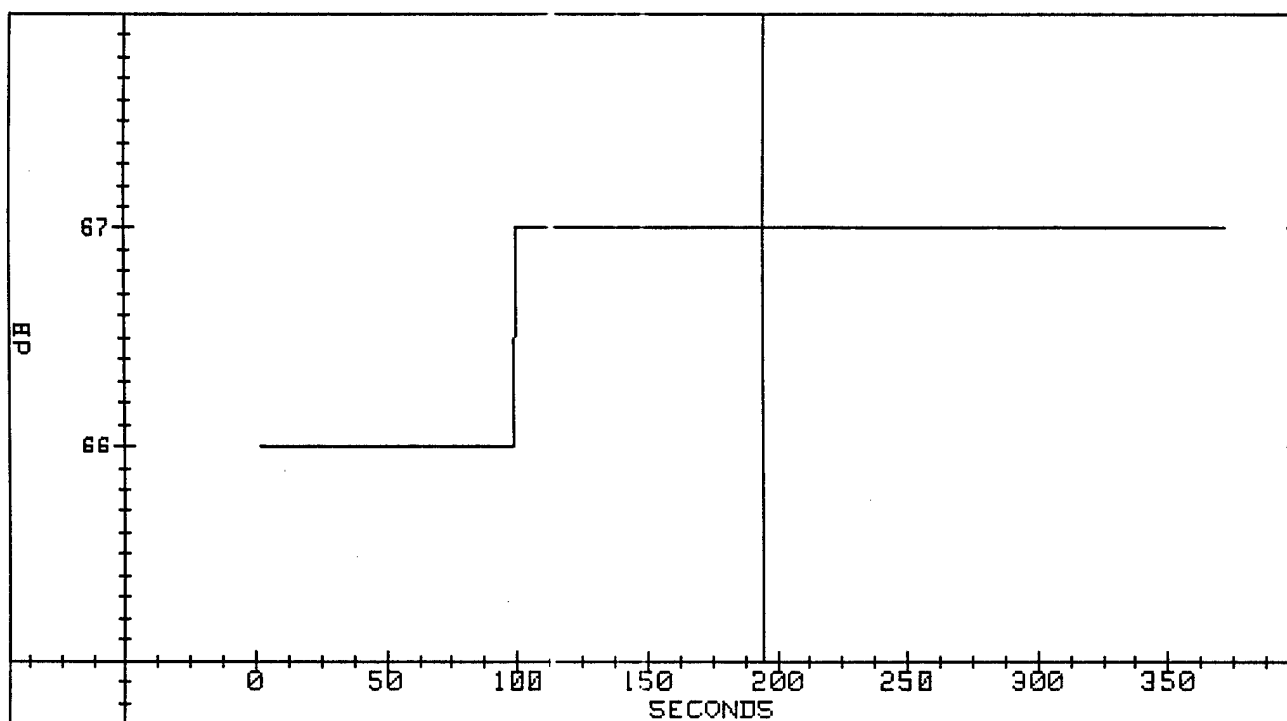
Ch3 RES Attenuation

DAY 179 TIME 0:48 PASS 16 m= 52, sd= 0



Ch4 RES Attenuation

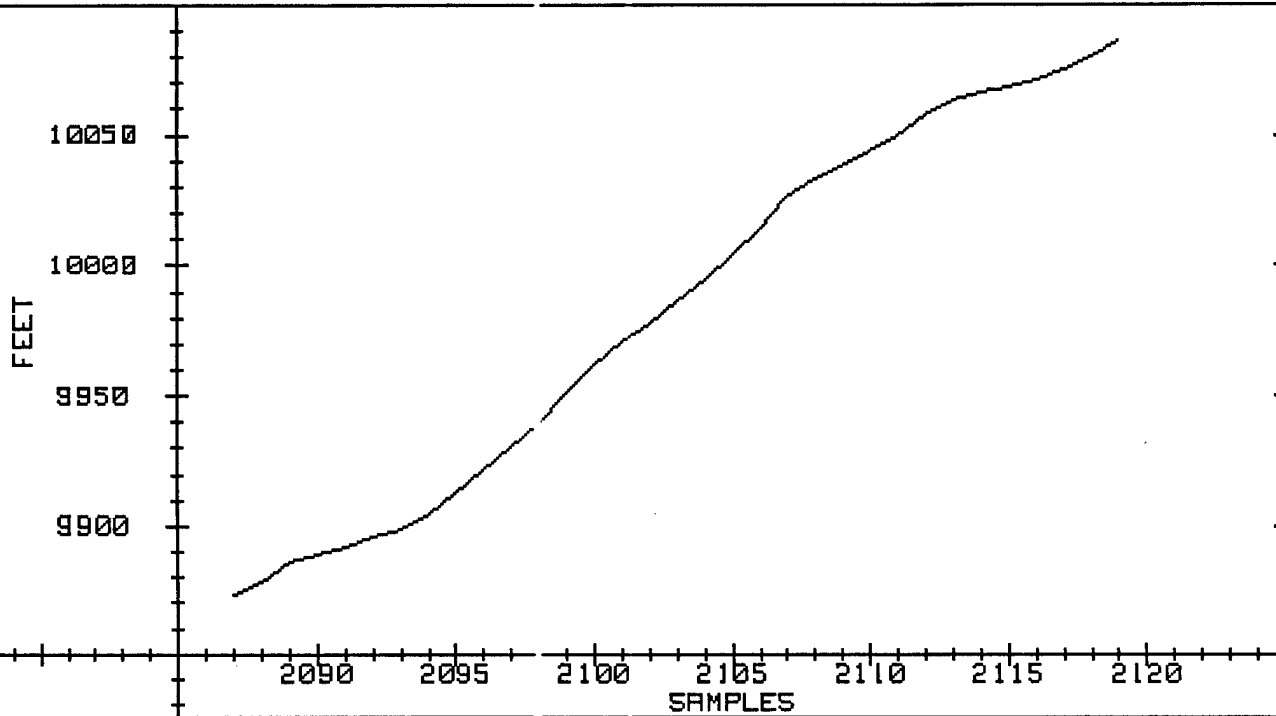
DAY 179 TIME 0:40 PASS 16 m= 67, sd= 0



## GPS ALTITUDE

MEAN= 9983.03 STANDARD DEVIATION= 70.6461

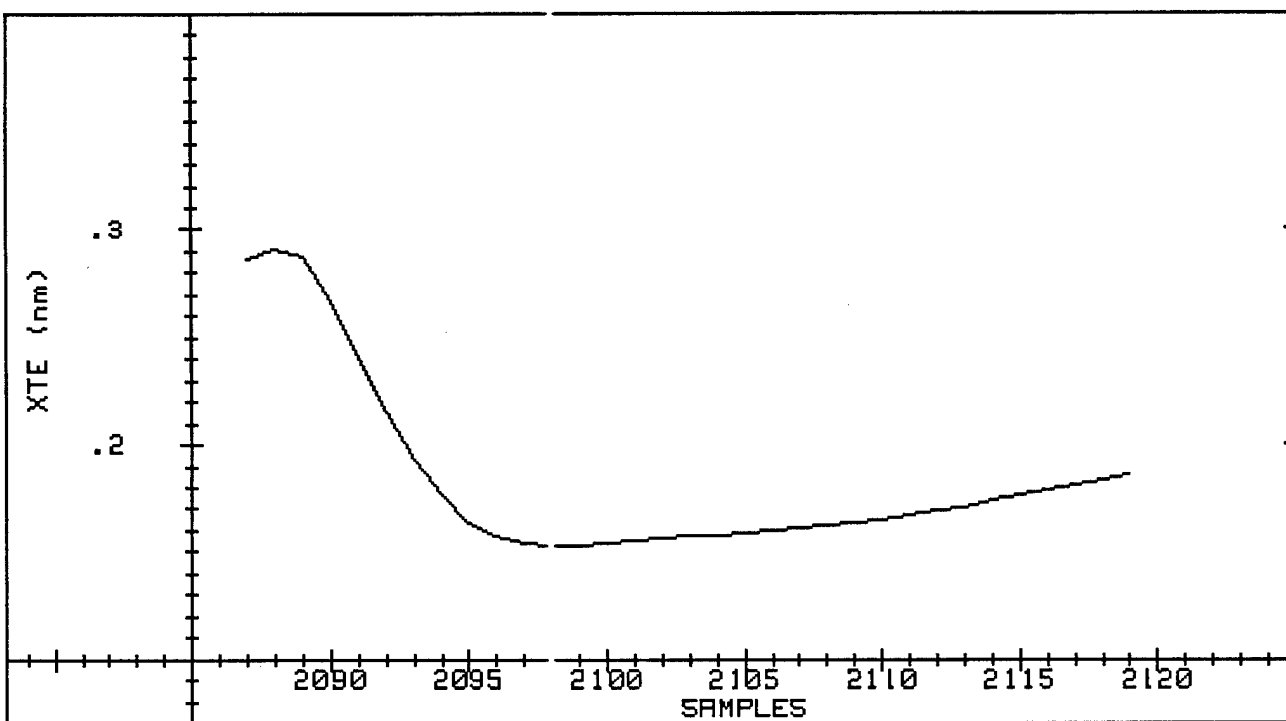
DATE: June 27, 1995 PASS 16

OFF  
ON  
BAR

GPS Cross Track Error

MEAN- .184152      STANDARD DEVIATION- .0410322

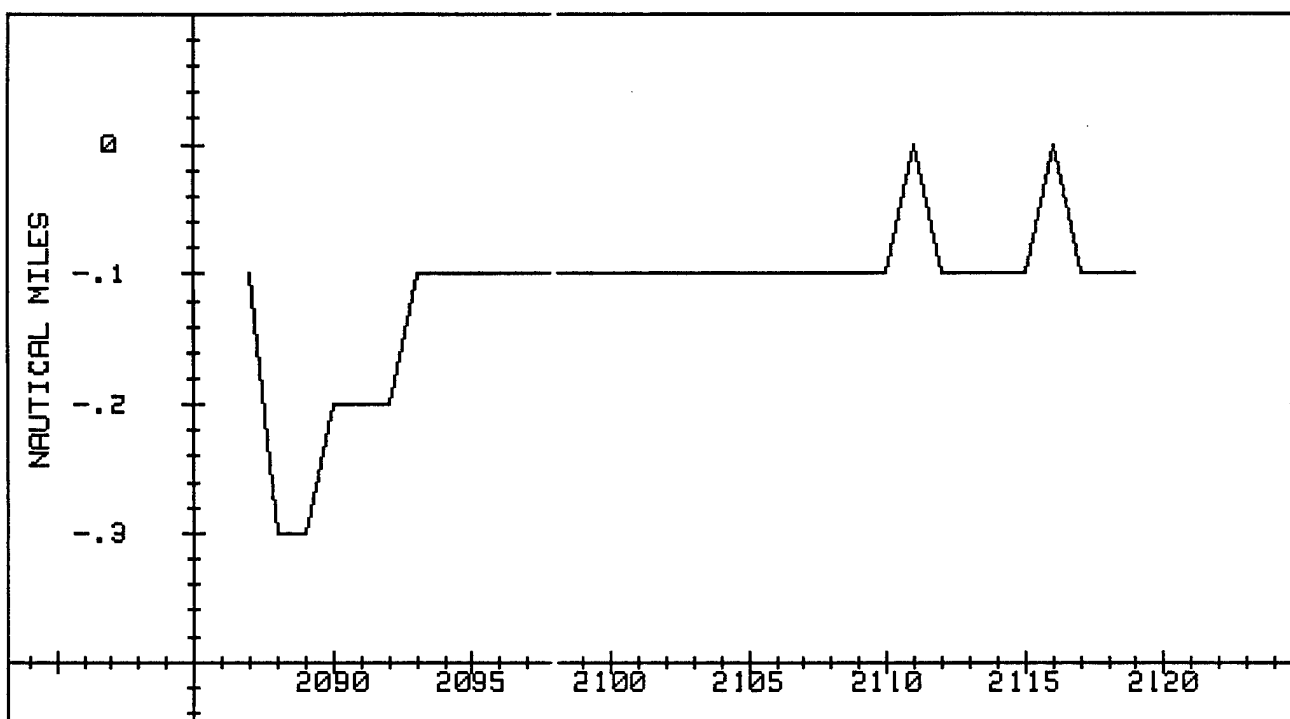
DATE: June 27, 1995      PASS 16



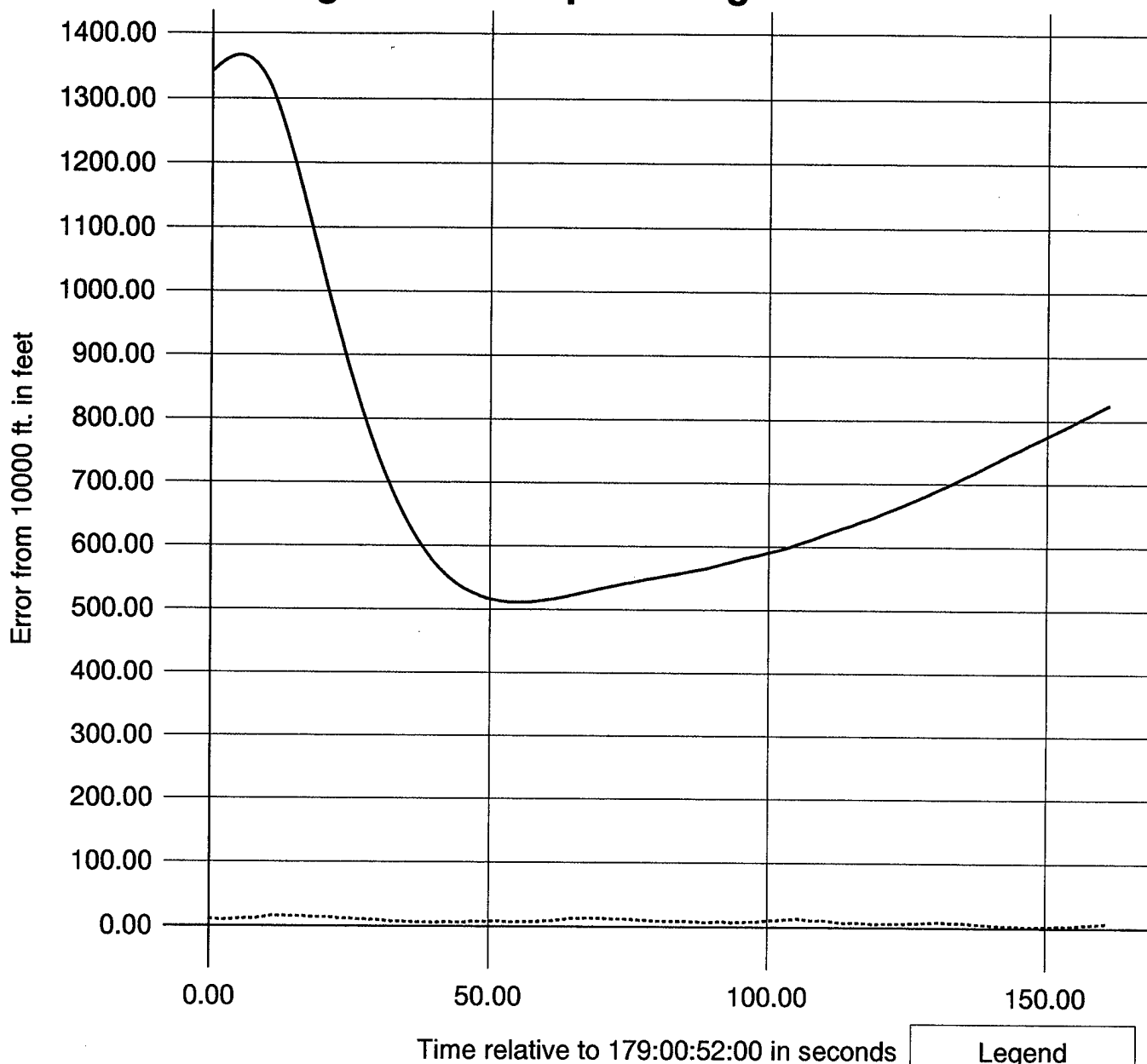
INS CROSS TRACK ERROR

MEAN= -.115152 STANDARD DEVIATION= .0609083

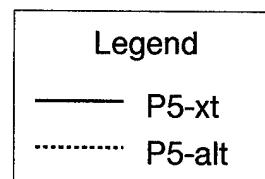
DATE: June 27, 1995 PASS 16



# **Portage, ME - June 27, 1995 - Pass 16 - Xtk. and Alt. Errors** **Higher alt. and port are greater than zero**



	Mean	St. Dev.
ALT.	8.52	3.25
XTK.	720.54	238.09



28 Jun 1995  
Tape: E1440

Post-line Data Sheet  
Line 27  
Mission: Presque Isle DAY 3

Time: 179:01:02:43  
Pass 17  
Req.# 14

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	10000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	9876 ft s.d.=	4 Swath Ctr Ang:	30.0°	30.0°	30.0°	30.0°
Slt. rng:	18460 ft	Tgt Dep Ang:	30.0°	30.0°	30.0°	30.0°
Look:	Right	St rng (ft):	16922	16922	16922	16922
Depr Ang:	25.0°	Near Rng Dep:	35.7°	35.7°	35.7°	35.7°
Des. trk:	210.0°	Far Rng Dep:	17.4°	17.4°	17.4°	17.4°
Start Sq:	90.0°	Atten (dB):	51.0	60.0	52.0	60.0
End Sq:	90.0°	RMS Video (%FS)	26.3	14.7	17.9	18.0

#### WAYPOINTS

Line_up:	N 46:57.51	W 68:13.24	Main Target:	IE
Start:	N 46:47.13	W 68:22.02	Mocomp Point:	
End:	N 46:38.47	W 68:29.28	Lat:	N 46:44.12
			Long:	W 68:28.98
From:	N 60:10.02	W 51:45.39	Tgt Trk:	0.0
To:	N 31:47.42	W 78:07.50	Tgt Vel:	0.0
			Alt:	770.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	->	10 sec
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)	
Swath width:	Single	Ave Gndspd:	Real	-> 253.1 kts
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4	
Position Reference:	ON	GPS Vel/Pos Reference		
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft	
Range Gate Delta:	0.0 ft	Range Tracking is	OFF	
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF	
TX Chirp Filename:	CTL1U2B	RX Chirp Filename:	CRL1N0A	
Ave Ref Vel ->	.3 fps (s.d.=	1.1)		
Ave Fil Vel ->	3.8 fps (s.d.=	1.1)		

NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation: 0.0°	Starting: 6533 ft	(2)
L: -70.0	Azimuth: 0.0°	Ending: 7794 ft	(2)
C: -70.0	Pitch: 0.0°		
P: 40.1			

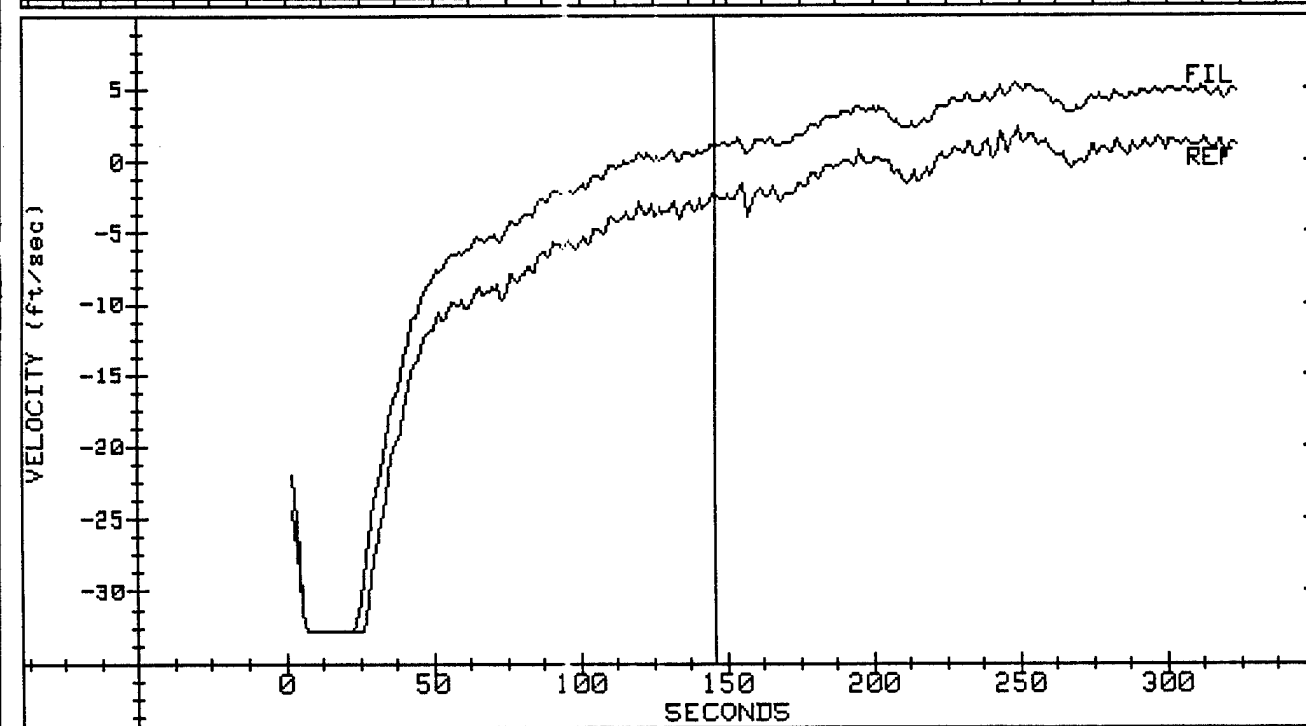
Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 2079.0	X: 63.8 dB	Start: 01:02:43
Y: 1867.0	L: 63.8 dB	End: 01:05:23
Z: 17142.0	C: 63.8 dB	

#### Mocomp Counters

Start:	1010451	000F6B13h	CPA (UCT):	00:00:00
End:	1037274	000FD3DAh	Alt:	0 ft (GPS)
			Lat:	N 0:00: 0
			Lon:	E 0:00: 0

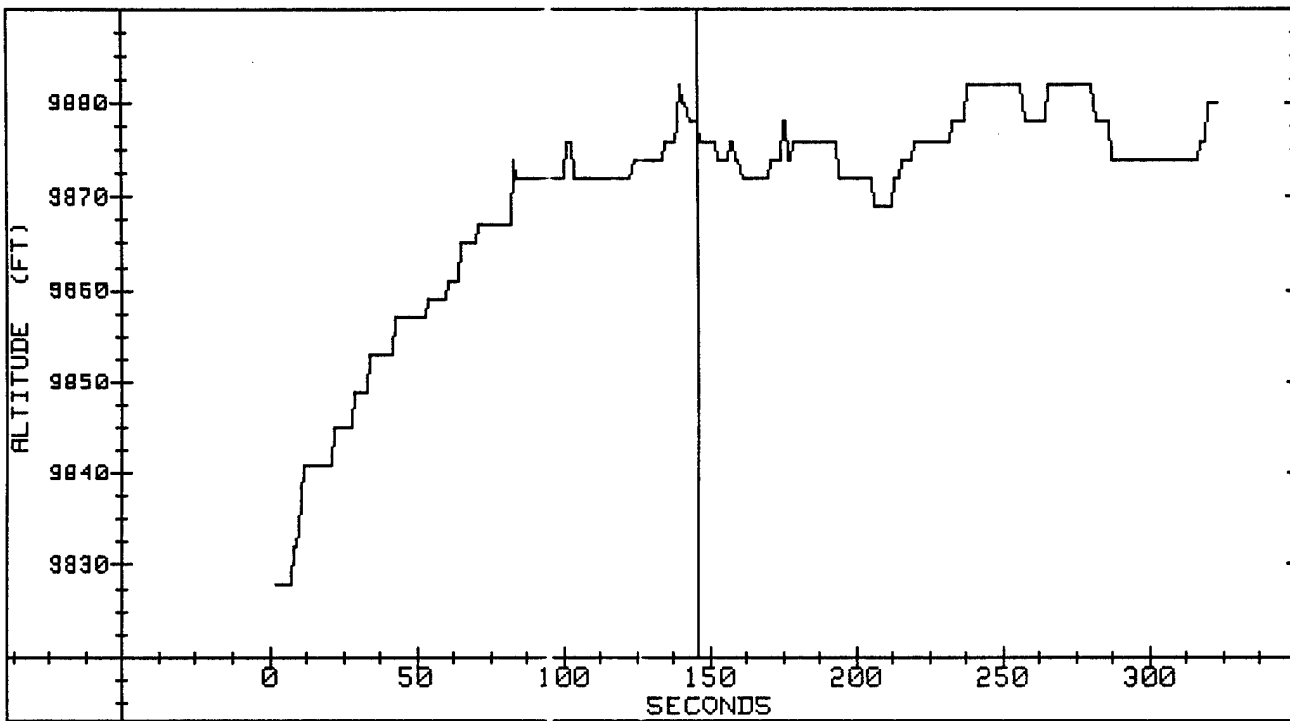
FILTERED vs. REF. VELOCITY  
DAY 179 TIME 1:0 PASS 17

INE  
LORAN  
CPS



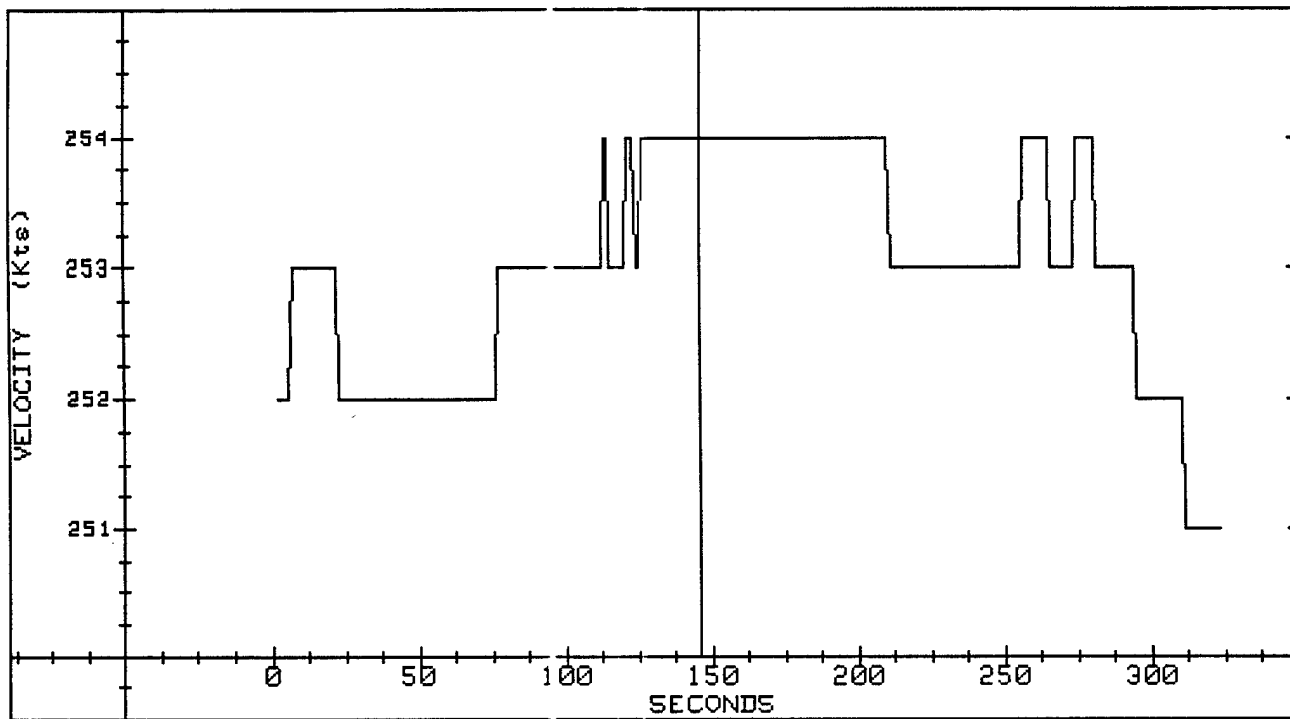
BARO ALTITUDE

DAY 179 TIME 1:0 PASS 17 m= 9876, sd= 3.74438



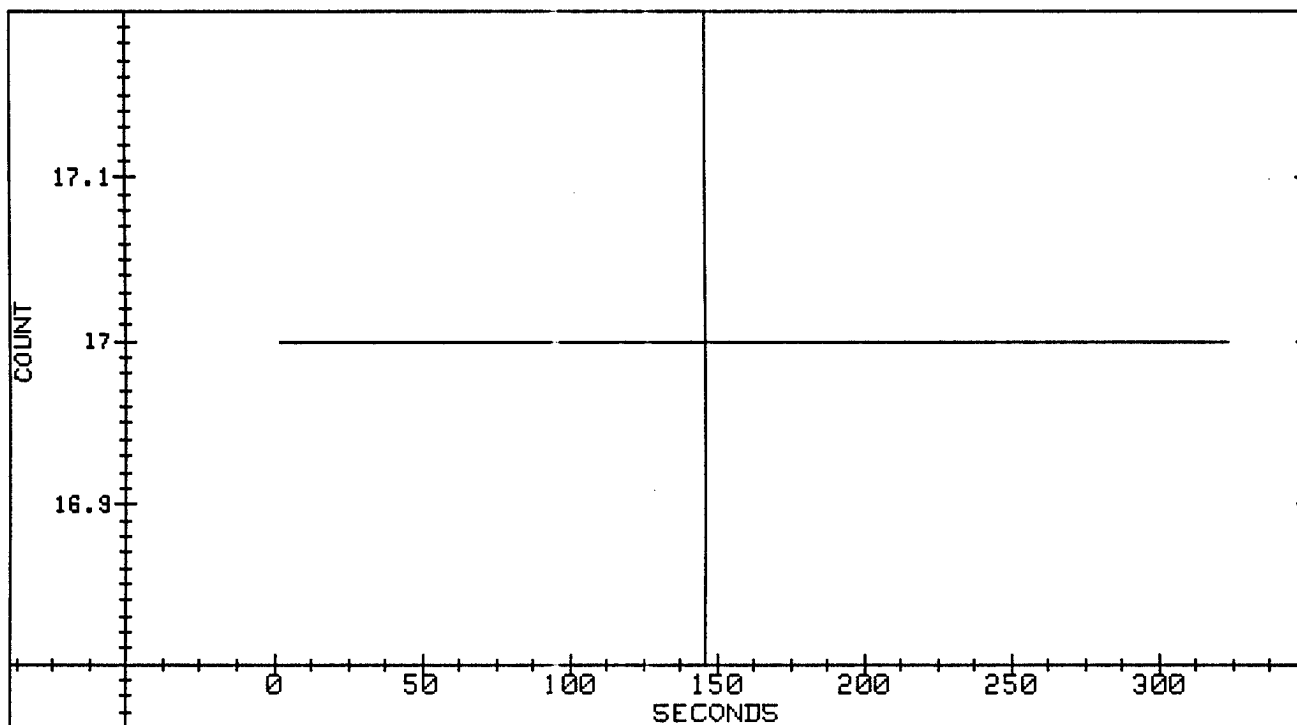
INS GROUND SPEED

DAY 179 TIME 1:0 PASS 17 m= 253.1, sd= .897596



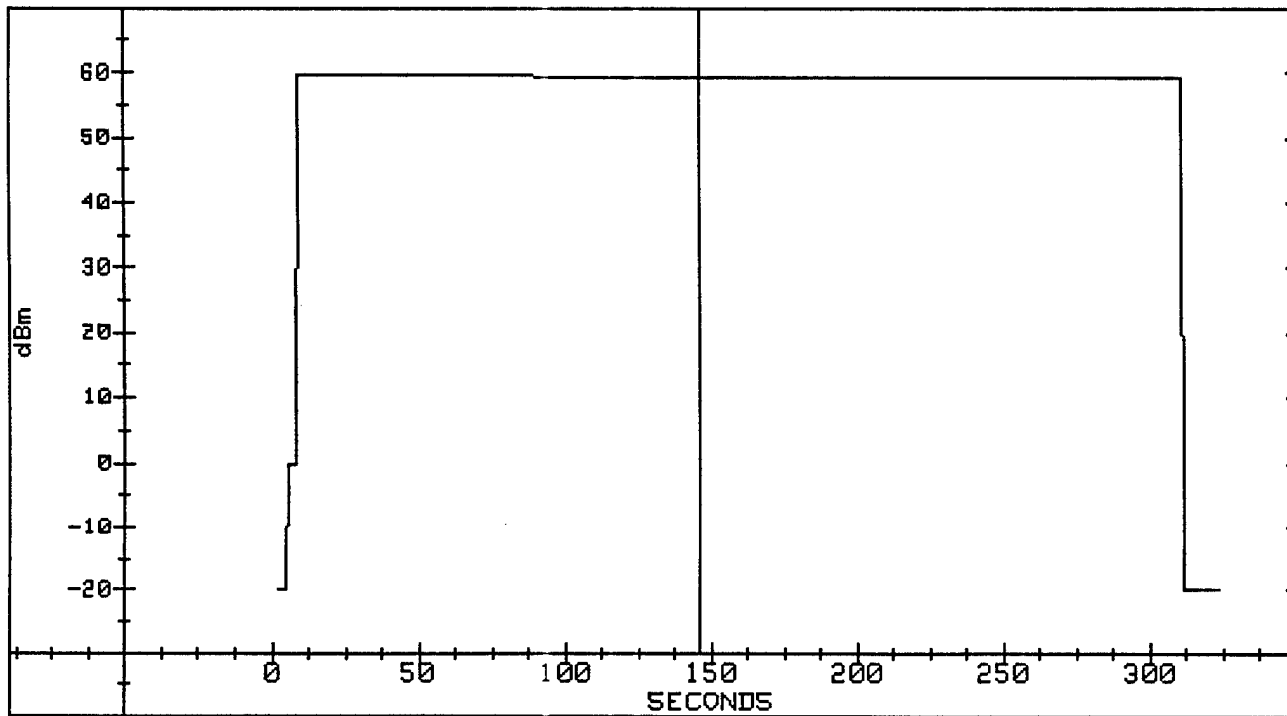
PASS NUMBER

DAY 179 TIME 1:0 PASS 17 m- 17, sd- 0



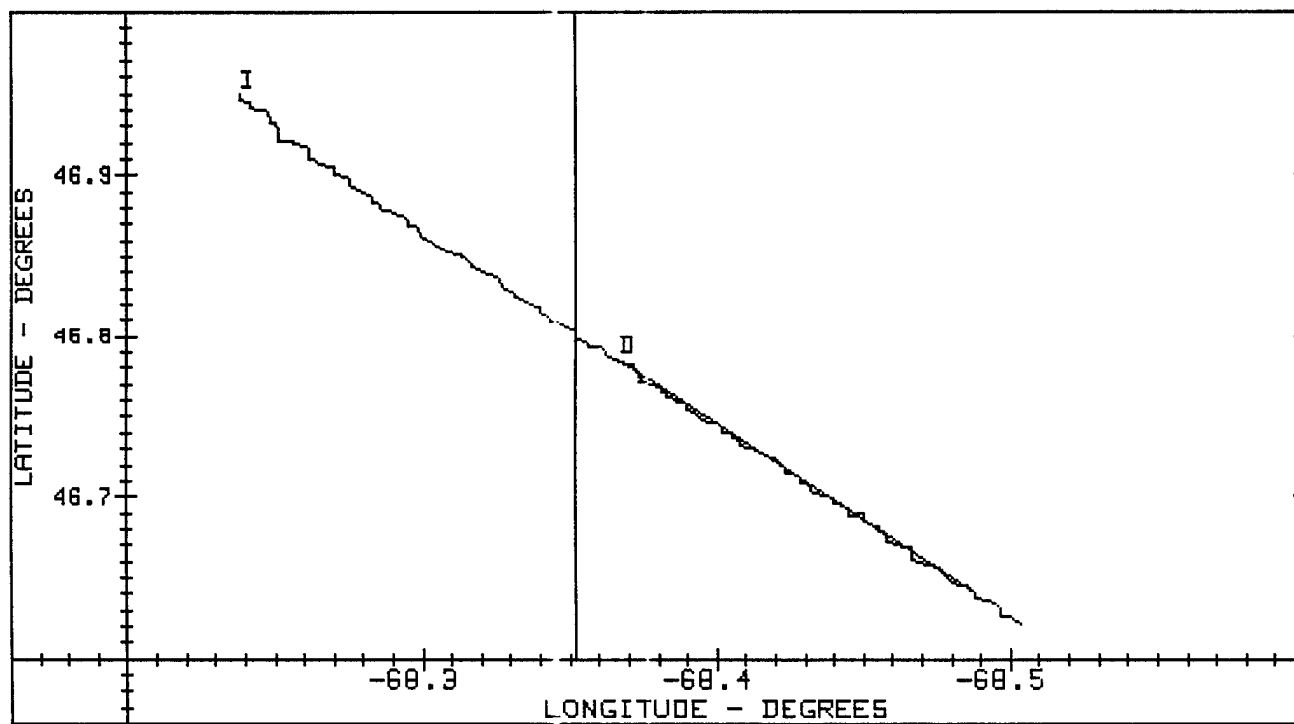
P Band Power

DAY 179 TIME 1:0 PASS 17 m= 52.92, sd= 21.6131



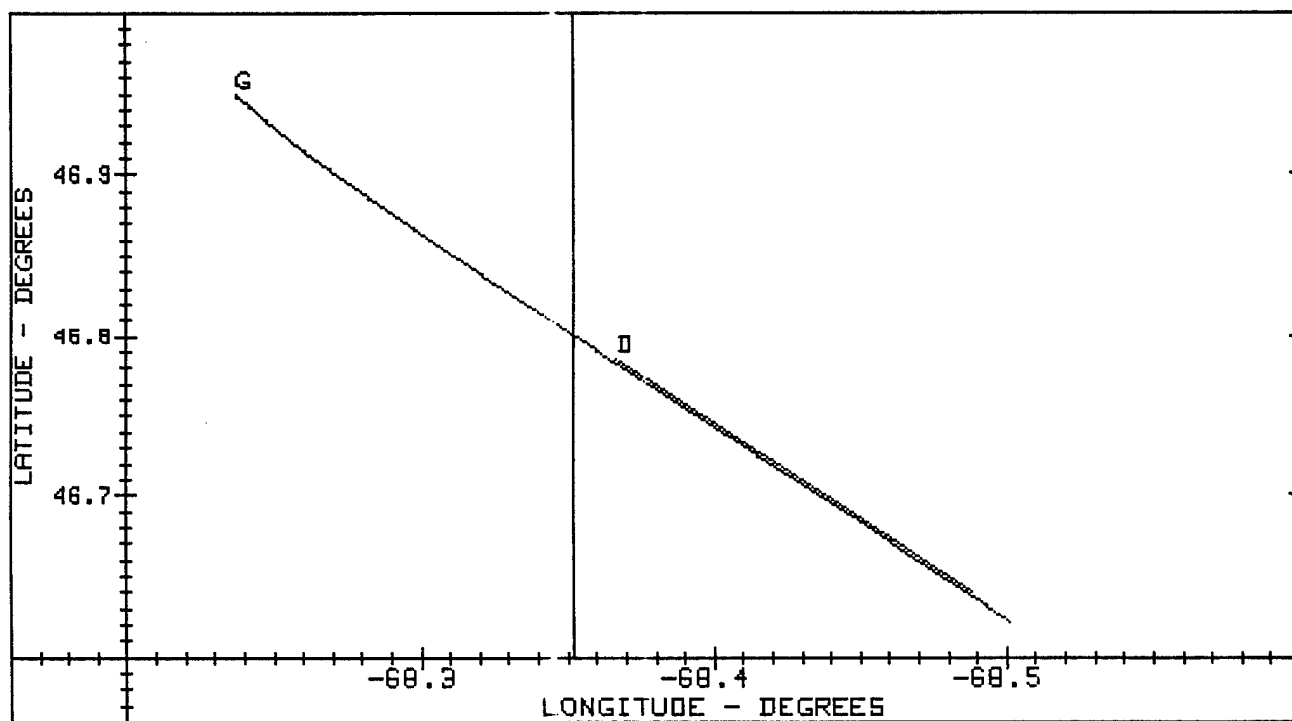
INS AIRCRAFT POSITION

DAY 179 TIME 1:0 PASS 17



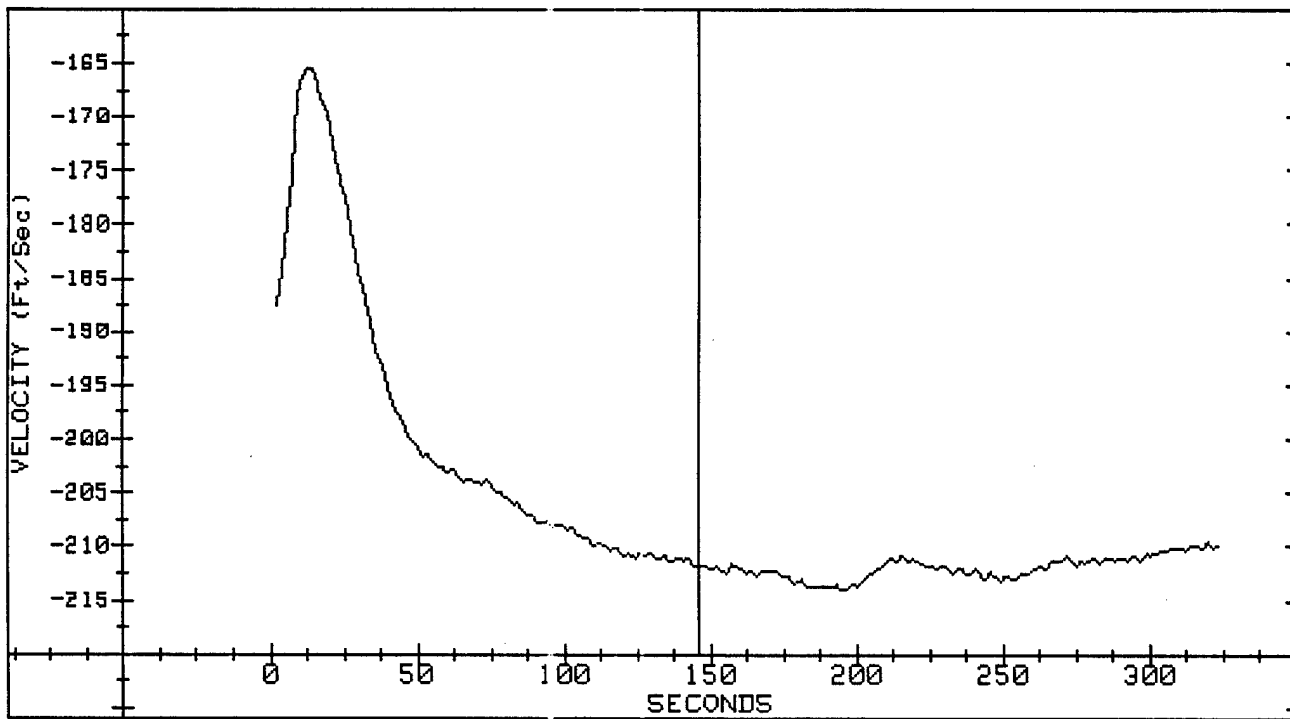
GPS AIRCRAFT POSITION

DAY 179 TIME 1:0 PASS 17



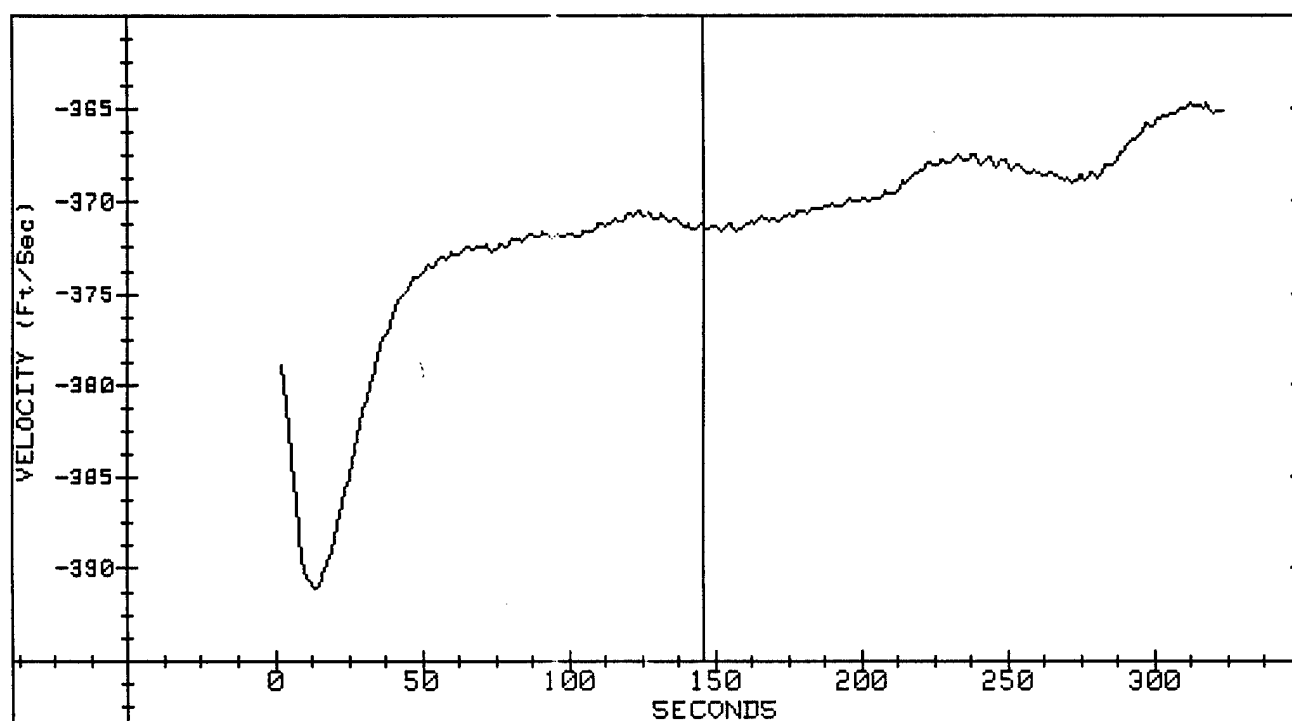
GPS V<sub>e</sub>

DAY 179 TIME 1:0 PASS 17 m= -211.9, sd= 1.10270



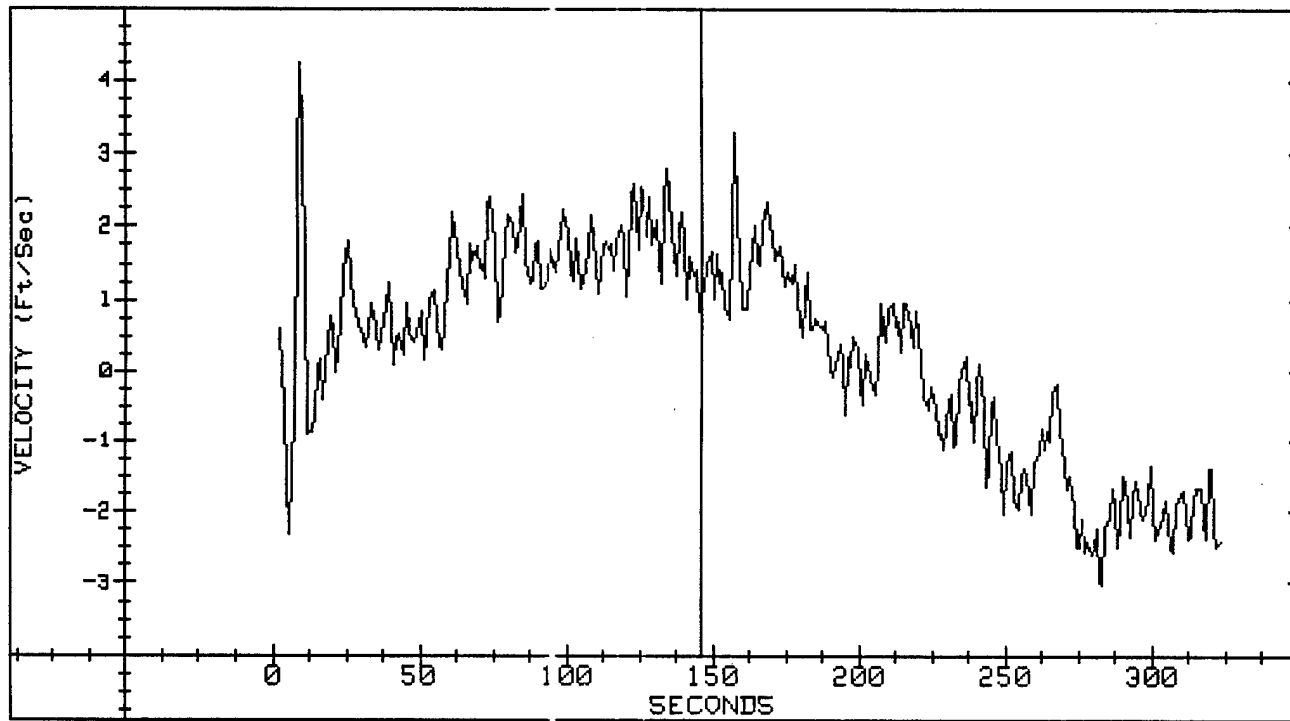
GPS Vn

DAY 179 TIME 1:0 PASS 17 m= -368.3, sd= 1.77852



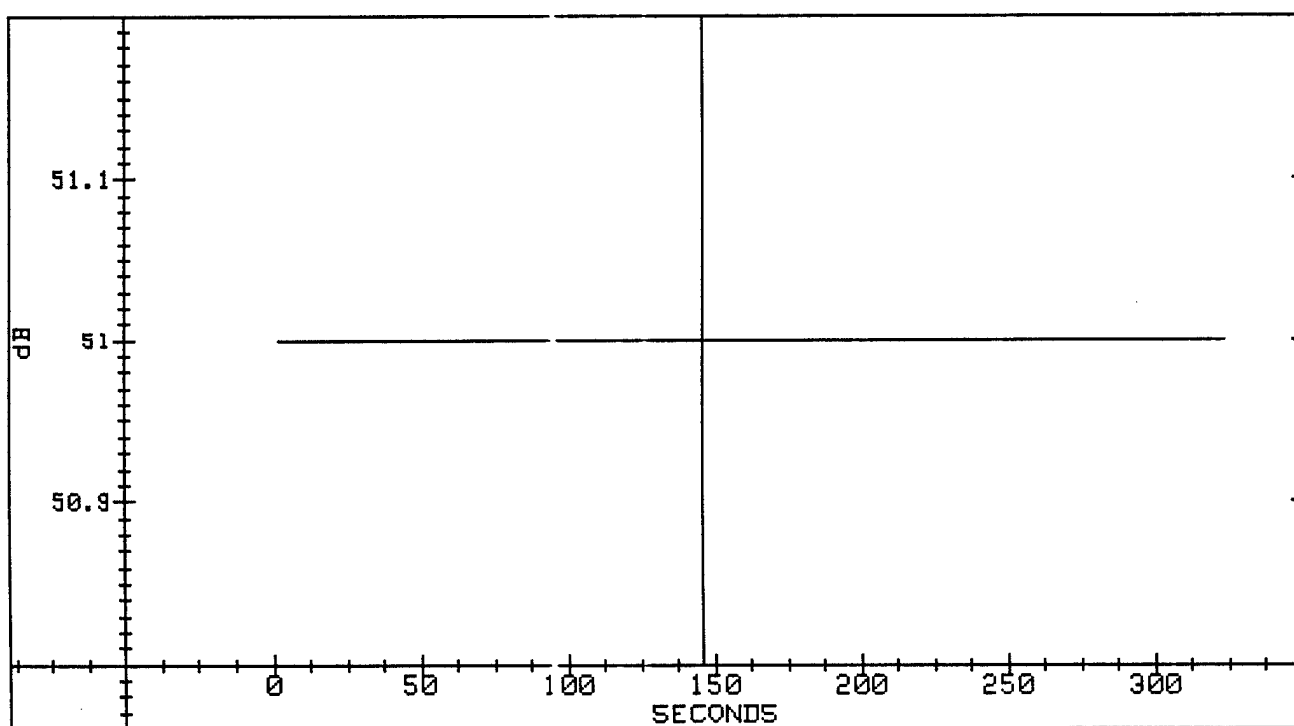
GPS Vv

DAY 179 TIME 1:0 PASS 17 m= -.6772, sd= 1.31944



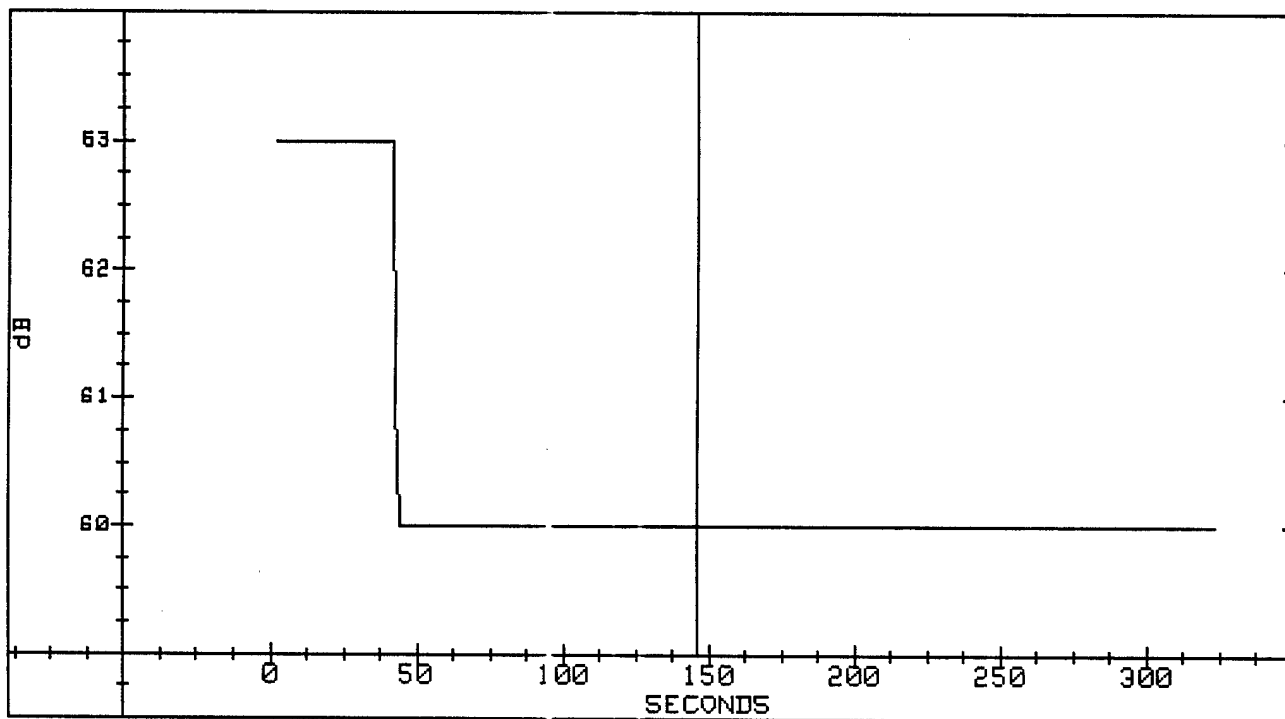
Ch1 RES Attenuation

DAY 179 TIME 1:0 PASS 17 m= 51, sd= 0



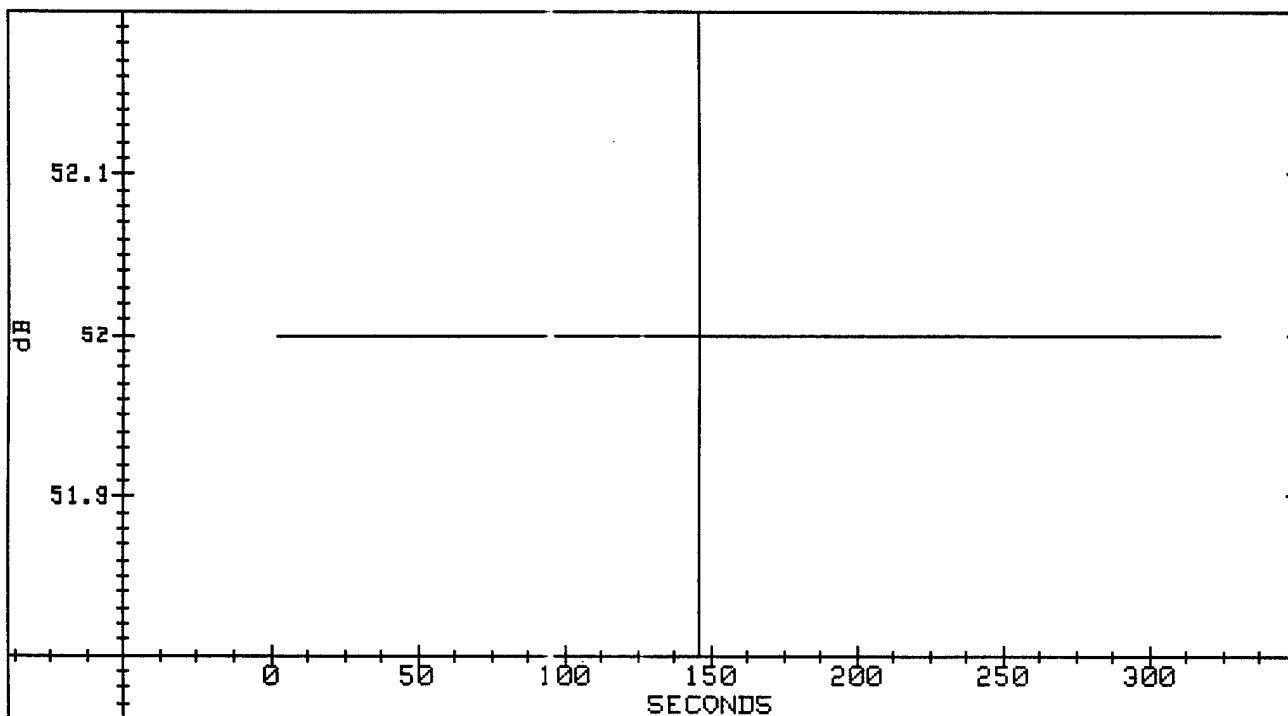
Ch2 RES Attenuation

DAY 179 TIME 1:0 PASS 17 m= 60, sd= 0



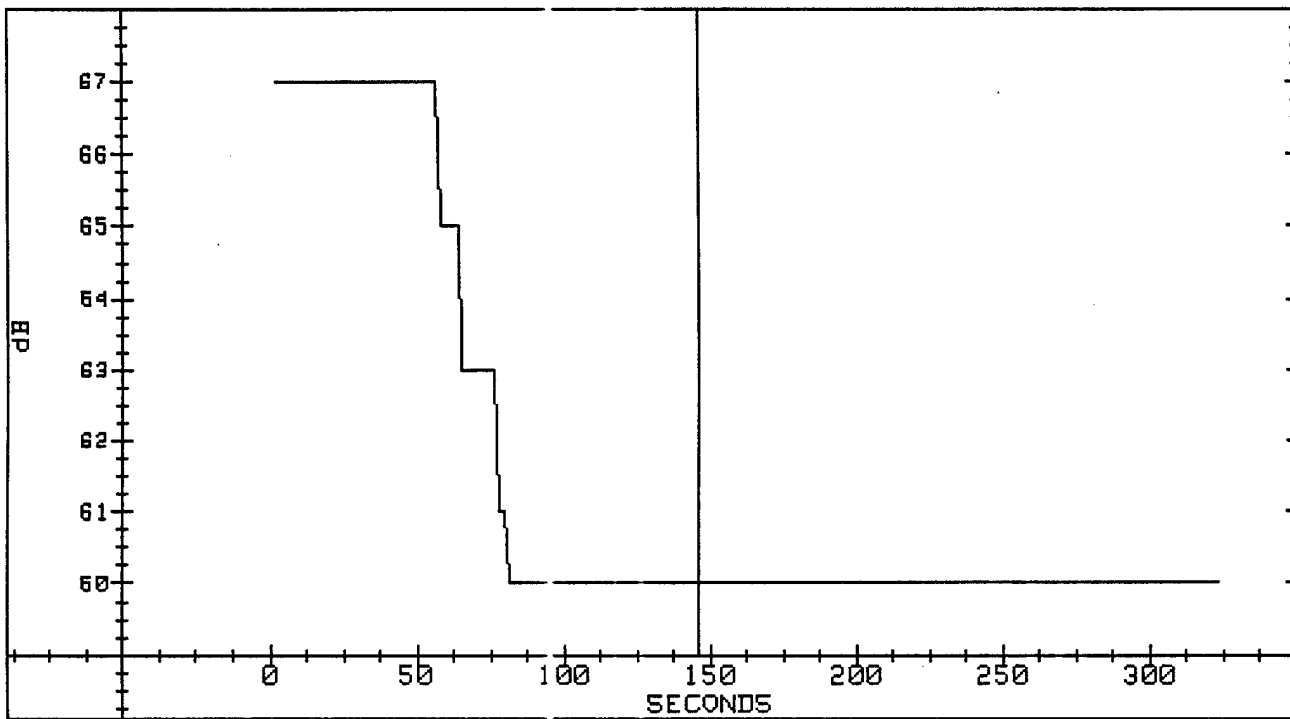
Ch3 RES Attenuation

DAY 179 TIME 1:0 PASS 17 m= 52, sd= 0



Ch4 RES Attenuation

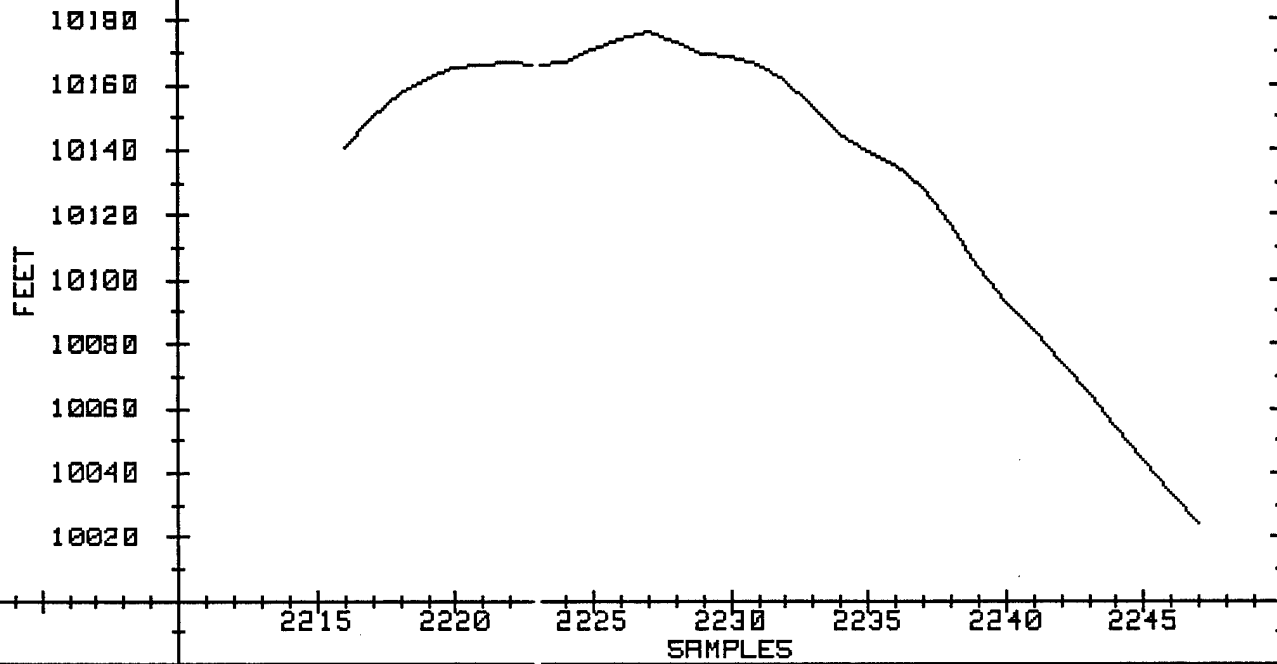
DAY 179 TIME 1:0 PASS 17 m= 50, sd= 0



## GPS ALTITUDE

MEAN= 10131 STANDARD DEVIATION= 46.0682

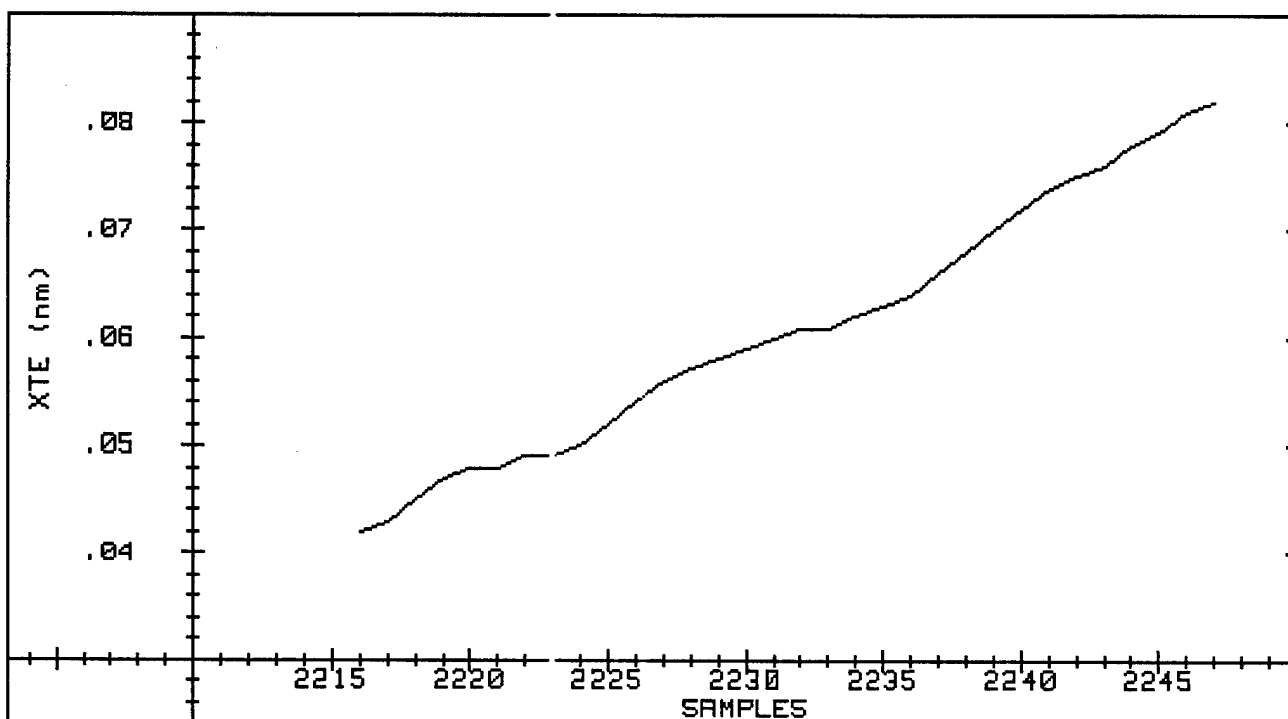
DATE: June 27, 1995 PASS 17

OFF  
ON  
BAR

GPS Cross Track Error

MEAN- .0609063 STANDARD DEVIATION- .0117257

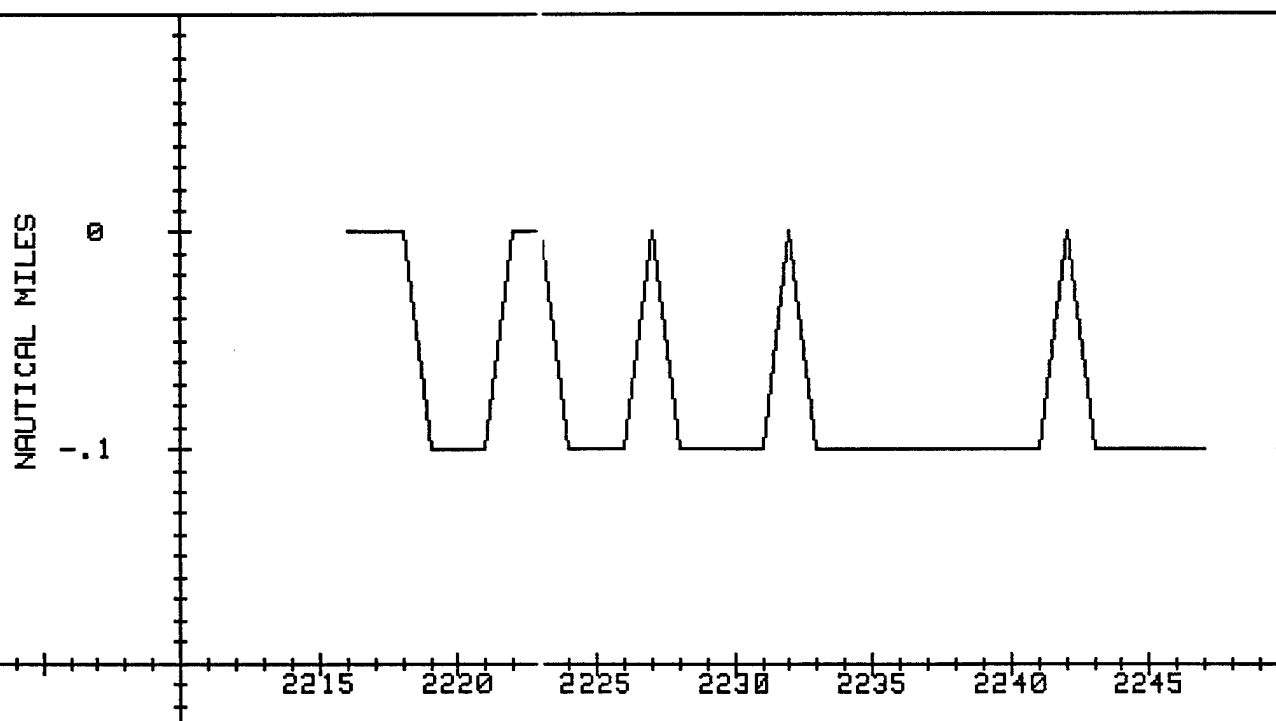
DATE: June 27, 1995 PASS 17



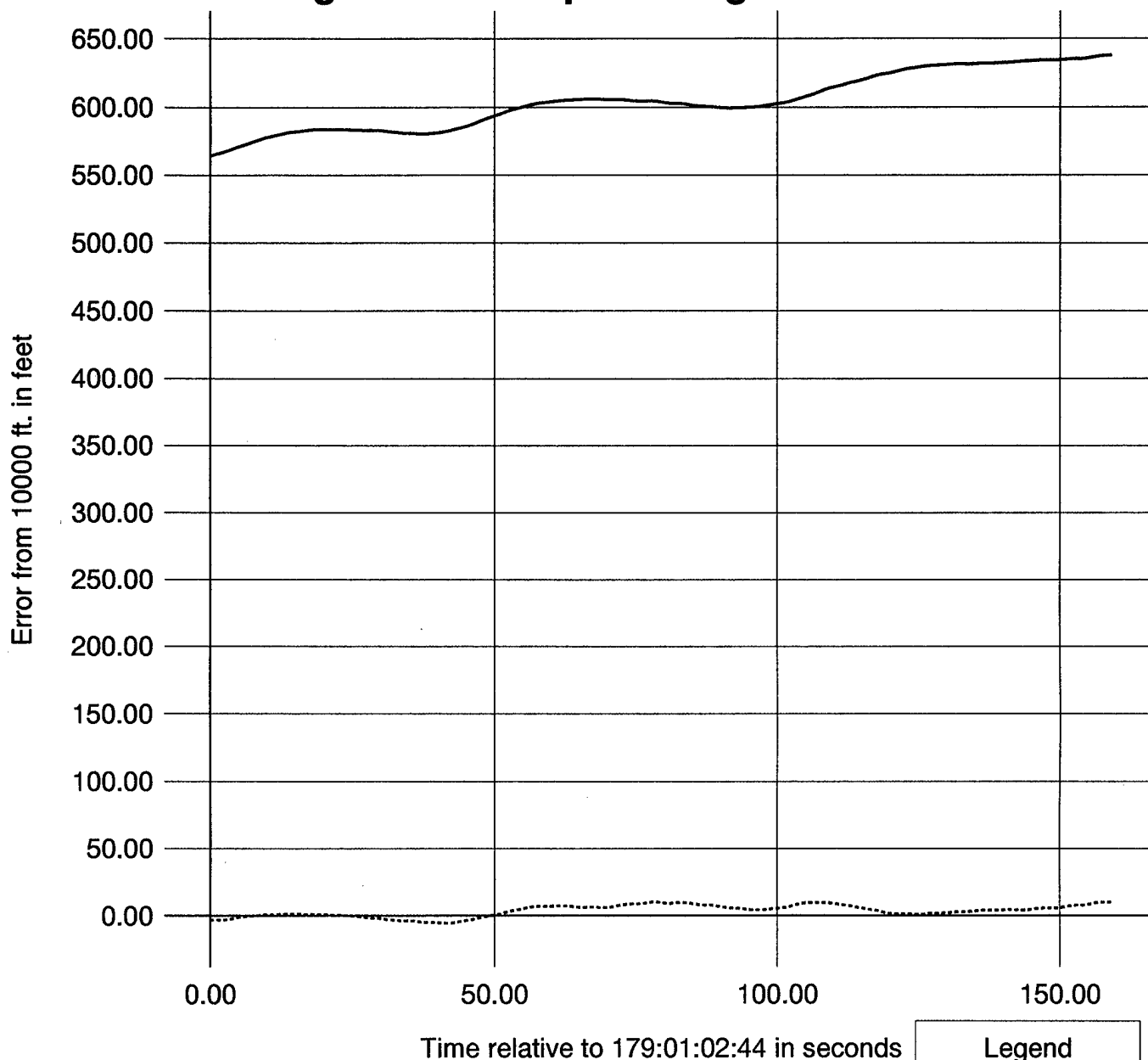
# INS CROSS TRACK ERROR

MEAN- -.075      STANDARD DEVIATION- .0433013

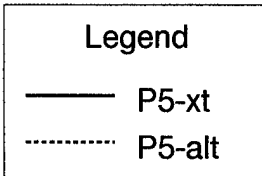
DATE: June 27, 1995      PASS 17



# Portage, ME - June 27, 1995 - Pass 17 - Xtk. and Alt. Errors Higher alt. and port are greater than zero



	Mean	St. Dev.
ALT.	3.59	4.31
XTK.	604.43	20.16



28 Jun 1995  
Tape: E1440

Post-line Data Sheet  
Line 25  
Mission: Presque Isle DAY 3

Time: 179:01:13:19  
Pass 18  
Req.# 13

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	10000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	9902 ft s.d.=	2 Swath Ctr Ang:	30.0°	30.0°	30.0°	30.0°
Slt. rng:	18460 ft	Tgt Dep Ang:	30.0°	30.0°	30.0°	30.0°
Look:	Right	St rng (ft):	16922	16922	16922	16922
Depr Ang:	25.0°	Near Rng Dep:	35.8°	35.8°	35.8°	35.8°
Des. trk:	30.0°	Far Rng Dep:	17.4°	17.4°	17.4°	17.4°
Start Sq:	90.0°	Atten (dB):	52.0	67.0	52.0	66.0
End Sq:	90.0°	RMS Video (%FS)	22.2	12.8	18.7	13.7

#### WAYPOINTS

Line_up:	N 46:30.71	W 68:44.60	Main Target:	IE
Start:	N 46:41.11	W 68:35.93	Mocomp Point:	
End:	N 46:49.77	W 68:28.66	Lat:	N 46:44.12
			Long:	W 68:28.98
From:	N 31:49.89	W 78:14.04	Tgt Trk:	0.0
To:	N 60:12.77	W 51:51.23	Tgt Vel:	0.0
			Alt:	770.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	->	10 sec
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)	
Swath width:	Single	Ave Gndspd:	Real	-> 248.8 kts
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4	
Position Reference:	ON	GPS Vel/Pos Reference		
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft	
Range Gate Delta:	0.0 ft	Range Tracking is	OFF	
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF	
TX Chirp Filename:	CTL1U2B	RX Chirp Filename:	CRL1N0A	
Ave Ref Vel ->	4.7 fps (s.d.=	3.6)		
Ave Fil Vel ->	8.6 fps (s.d.=	3.4)		

NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation:	0.0°	
L: -70.0	Azimuth:	0.0°	Starting: 7808 ft (2)
C: -70.0	Pitch:	0.0°	Ending: 9083 ft (2)
P: 40.2			

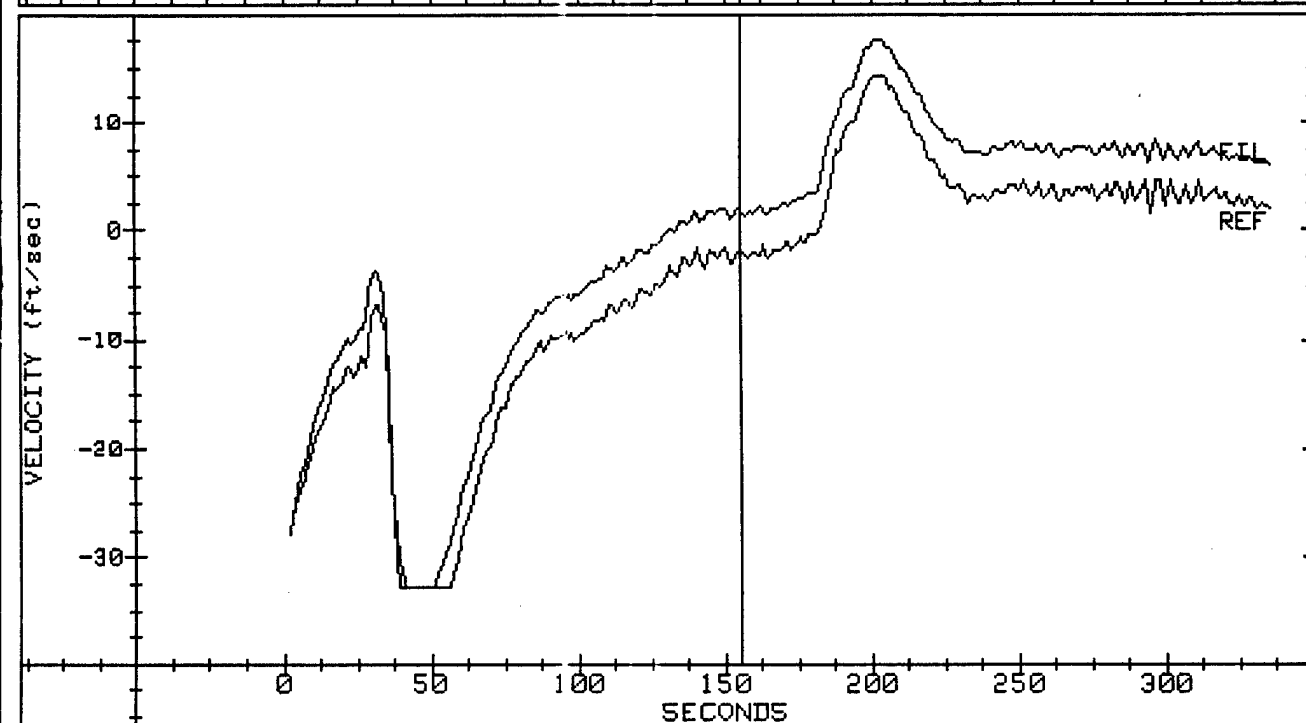
Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 2079.0	X: 63.8 dB	Start: 01:13:19
Y: 1867.0	L: 63.8 dB	End: 01:16:01
Z: 17142.0	C: 63.8 dB	

#### Mocomp Counters

Start:	1066285	0010452Dh	CPA (UCT):	00:00:00
End:	1093454	0010AF4Eh	Alt:	0 ft (GPS)
			Lat:	N 0:00: 0
			Lon:	E 0:00: 0

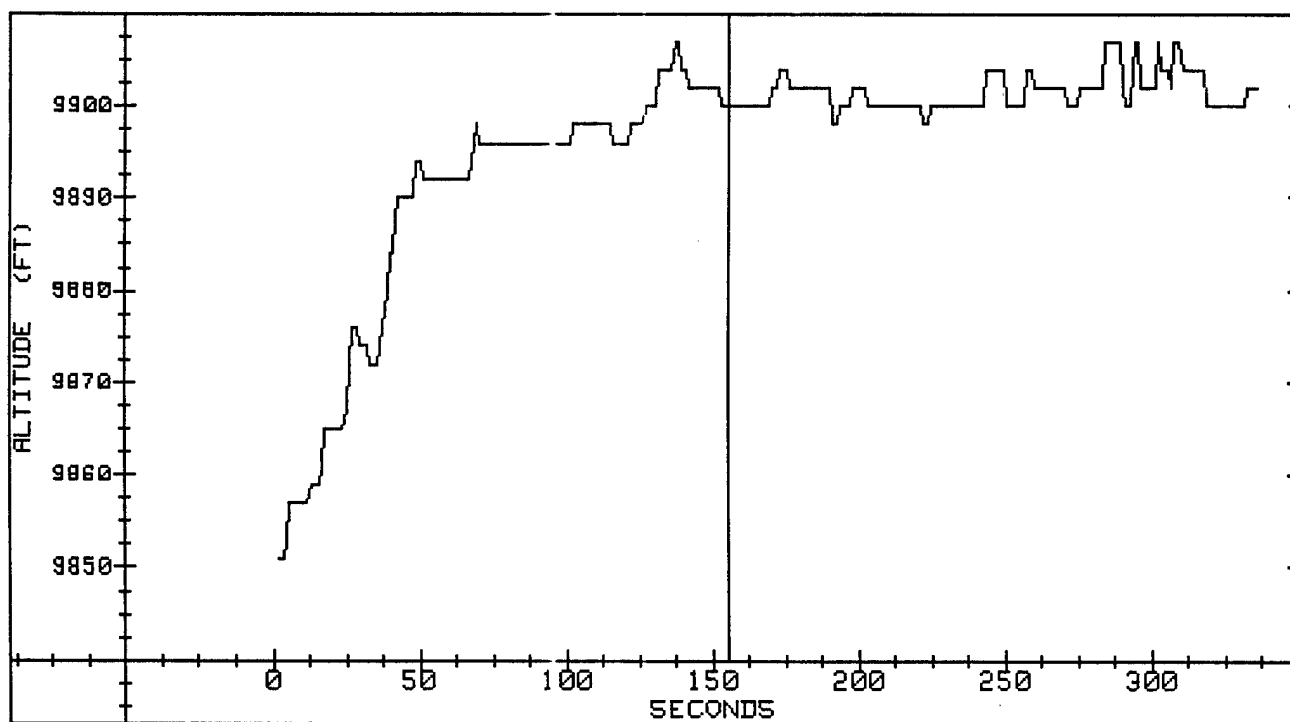
FILTERED vs. REF. VELOCITY  
DAY 179 TIME 1:10 PASS 18

INS  
LGRAN  
QPS



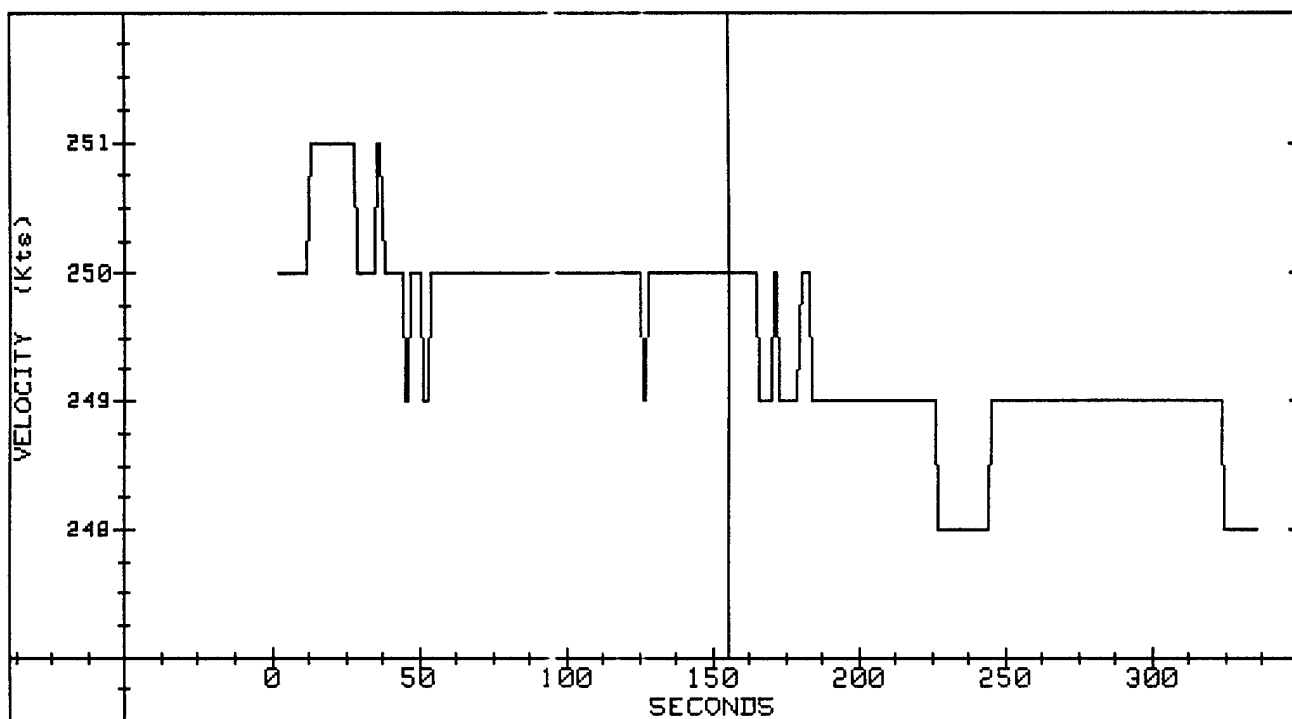
BARO ALTITUDE

DAY 179    TIME 1:10    PASS 10    m= 9902, sd= 2.11773



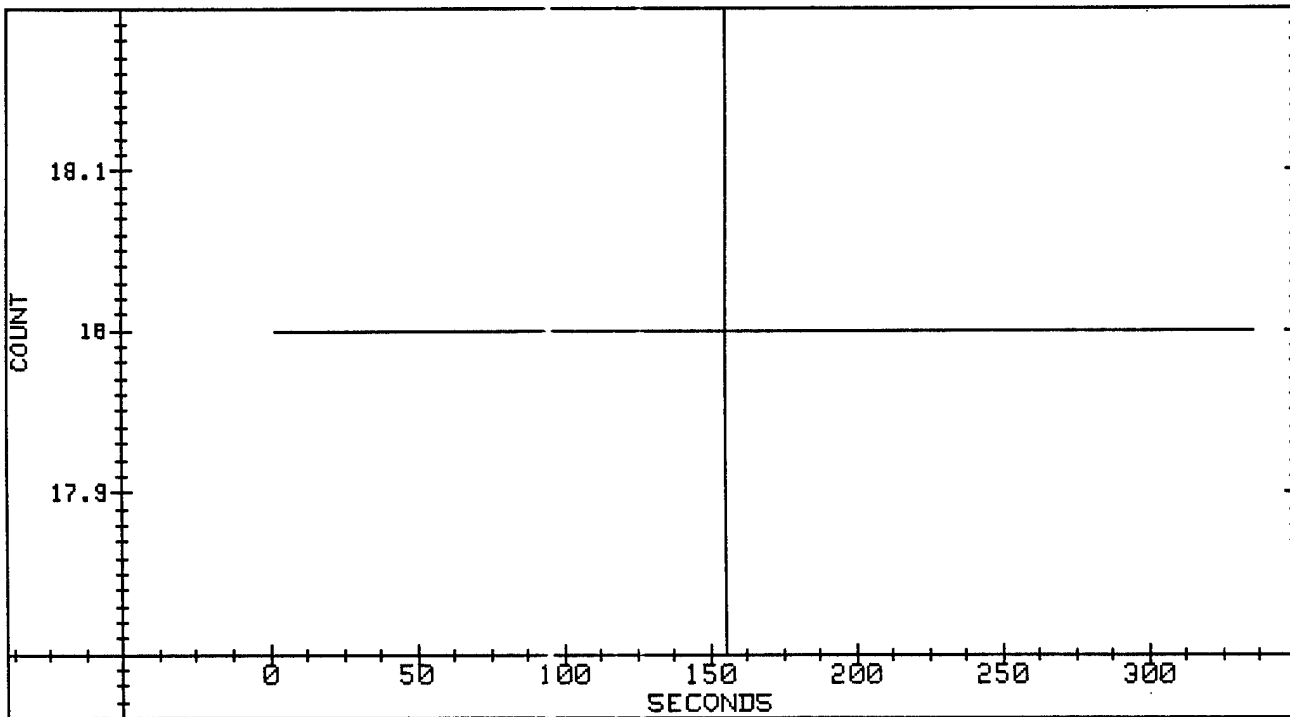
# INS GROUND SPEED

DAY 179 TIME 1:10 PASS 18 m= 248.8, sd= .427955



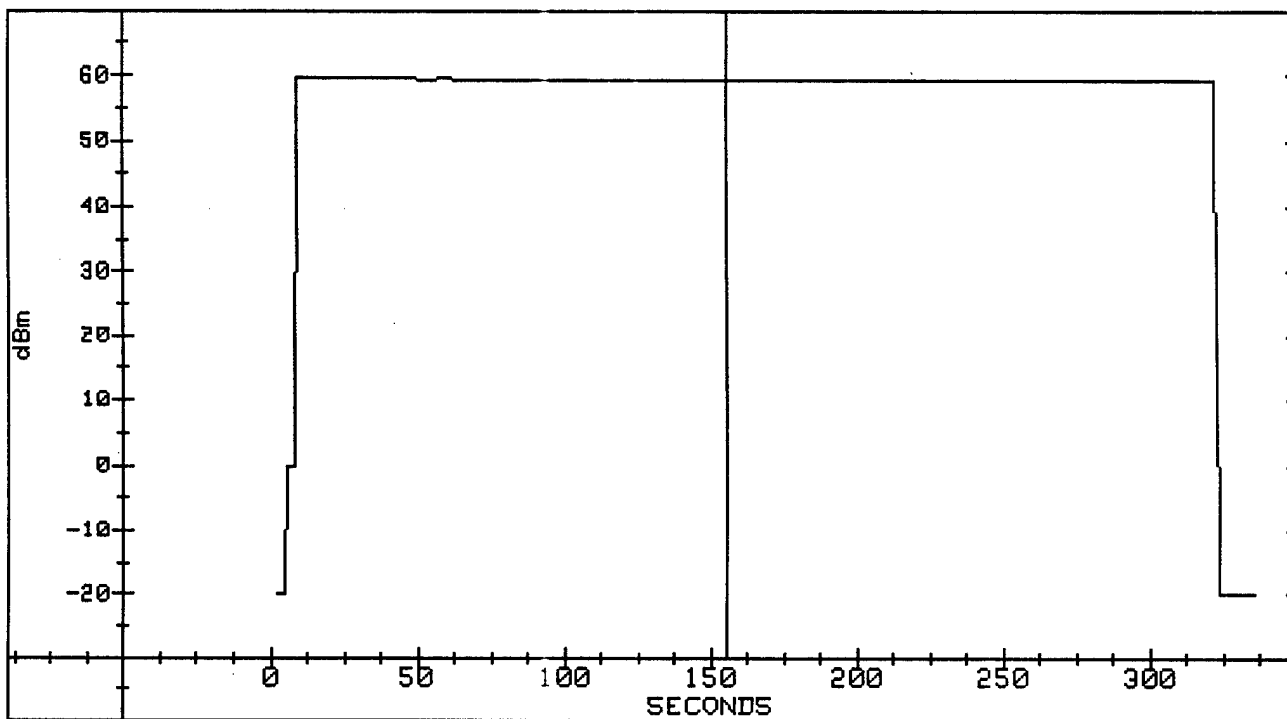
# PASS NUMBER

DAY 179 TIME 1:10 PASS 18 m= 18, sd= 0



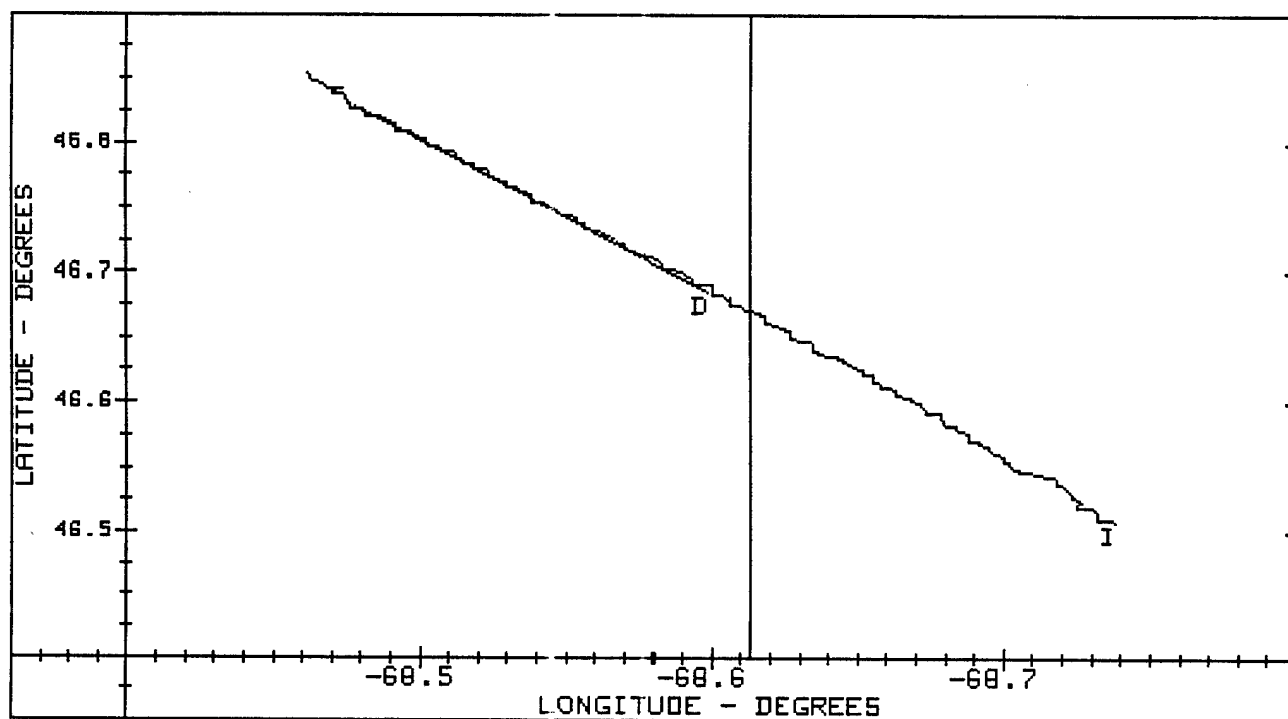
P Band Power

DAY 179 TIME 1:10 PASS 18 m= 52.96, sd= 21.4777



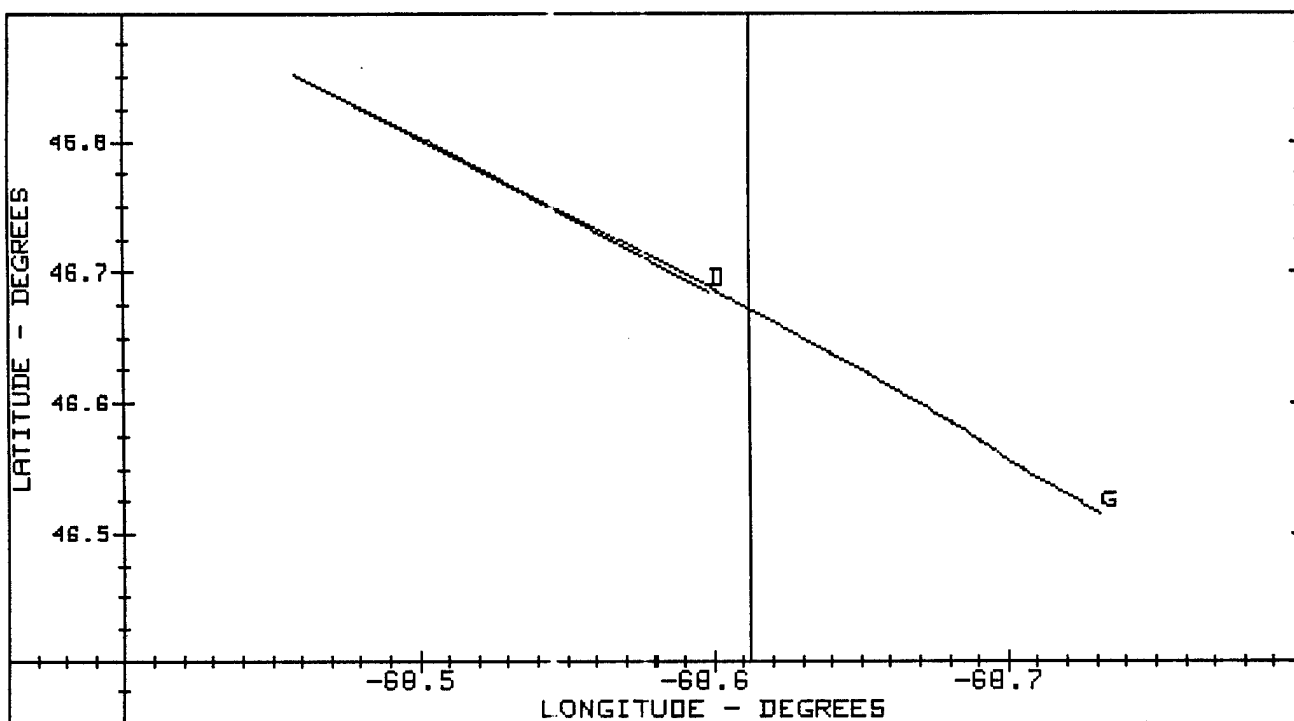
INS AIRCRAFT POSITION

DAY 179 TIME 1:10 PASS 10



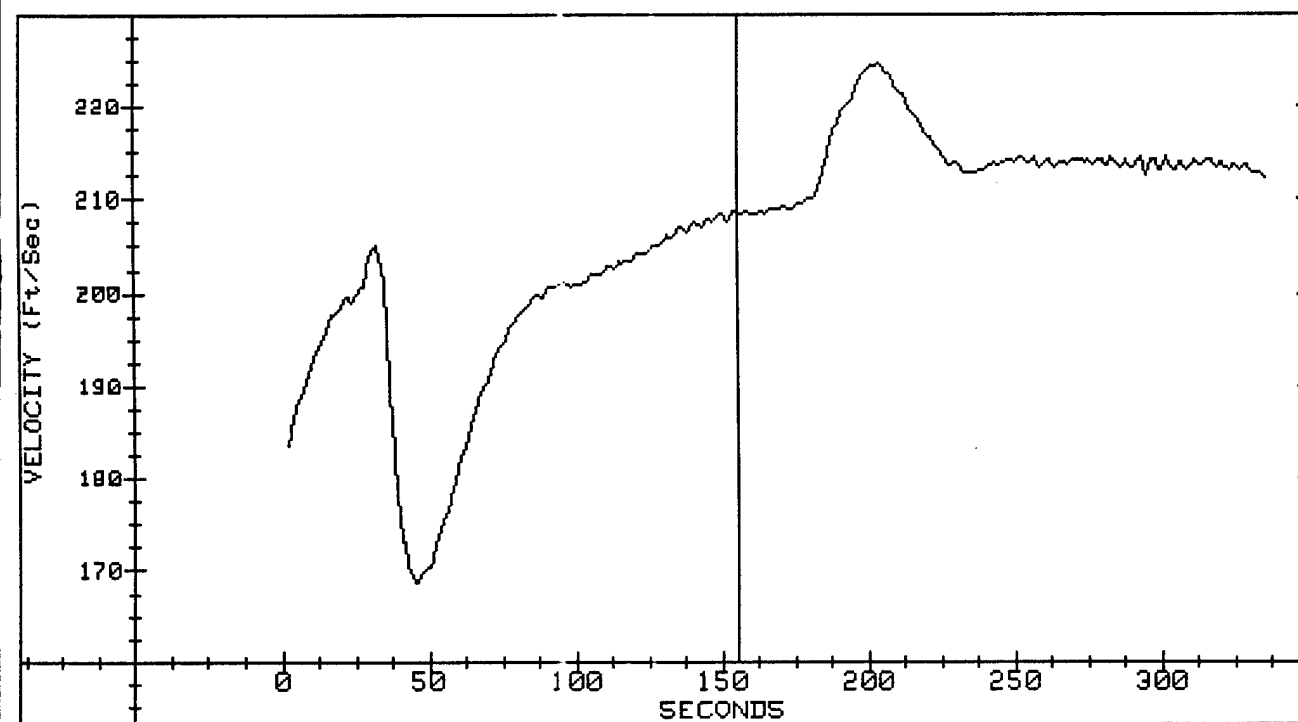
GPS AIRCRAFT POSITION

DAY 179 TIME 1:10 PASS 18



GPS V<sub>b</sub>

DAY 179 TIME 1:10 PASS 10 m= 215.1, sd= 3.52793



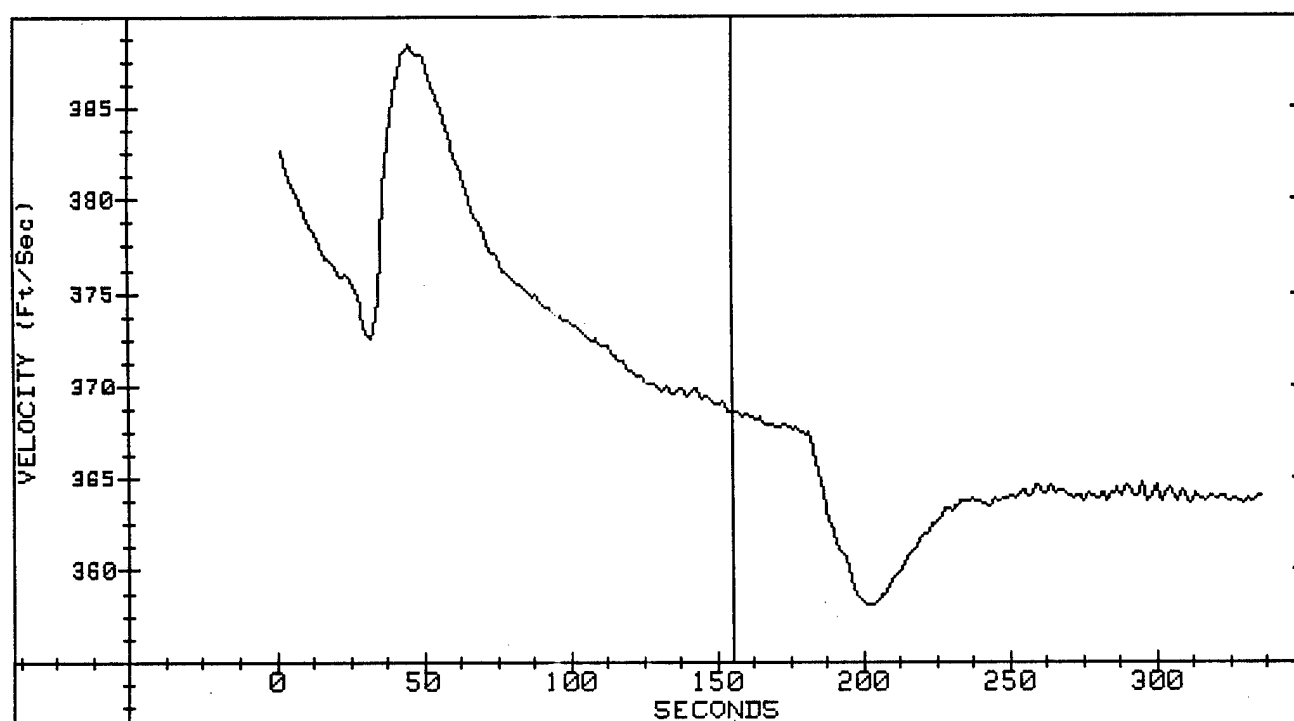
GPS Vn

DRY 179

TIME 1:10

PRSS 18

m= 363.4, sd= 2.07515



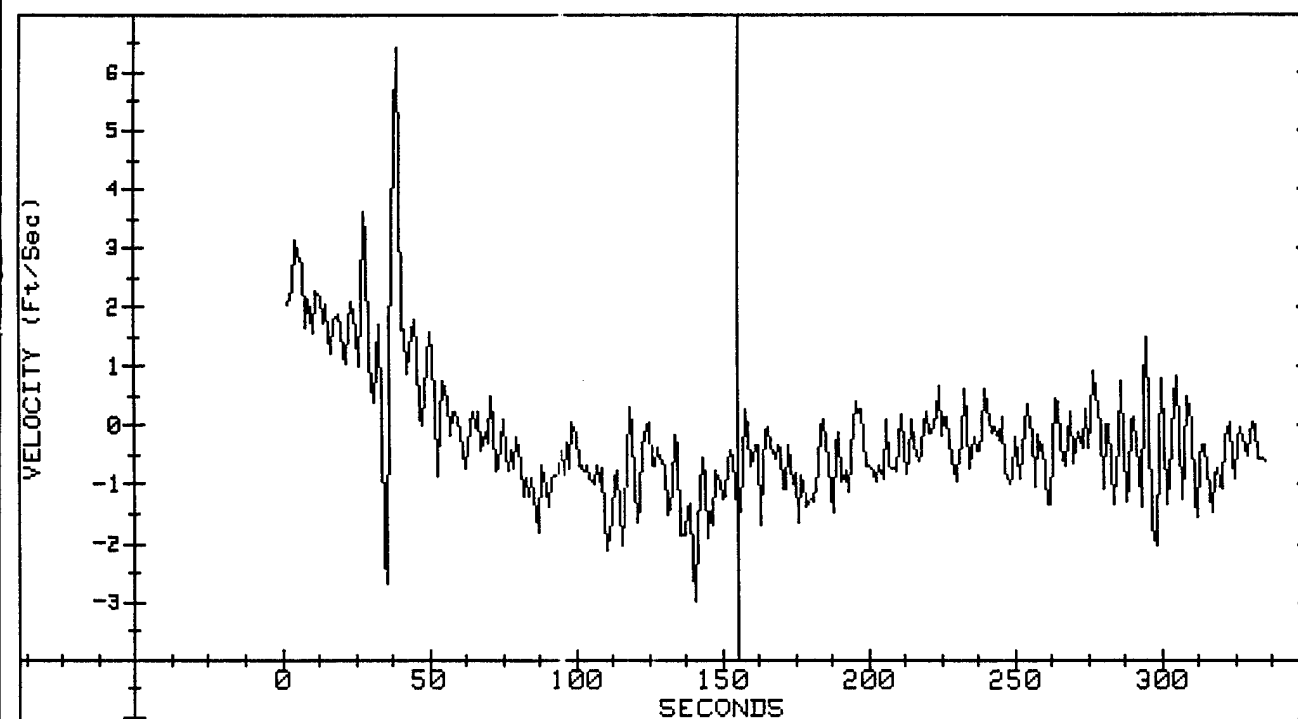
GPS Vv

DRY 179

TIME 1:10

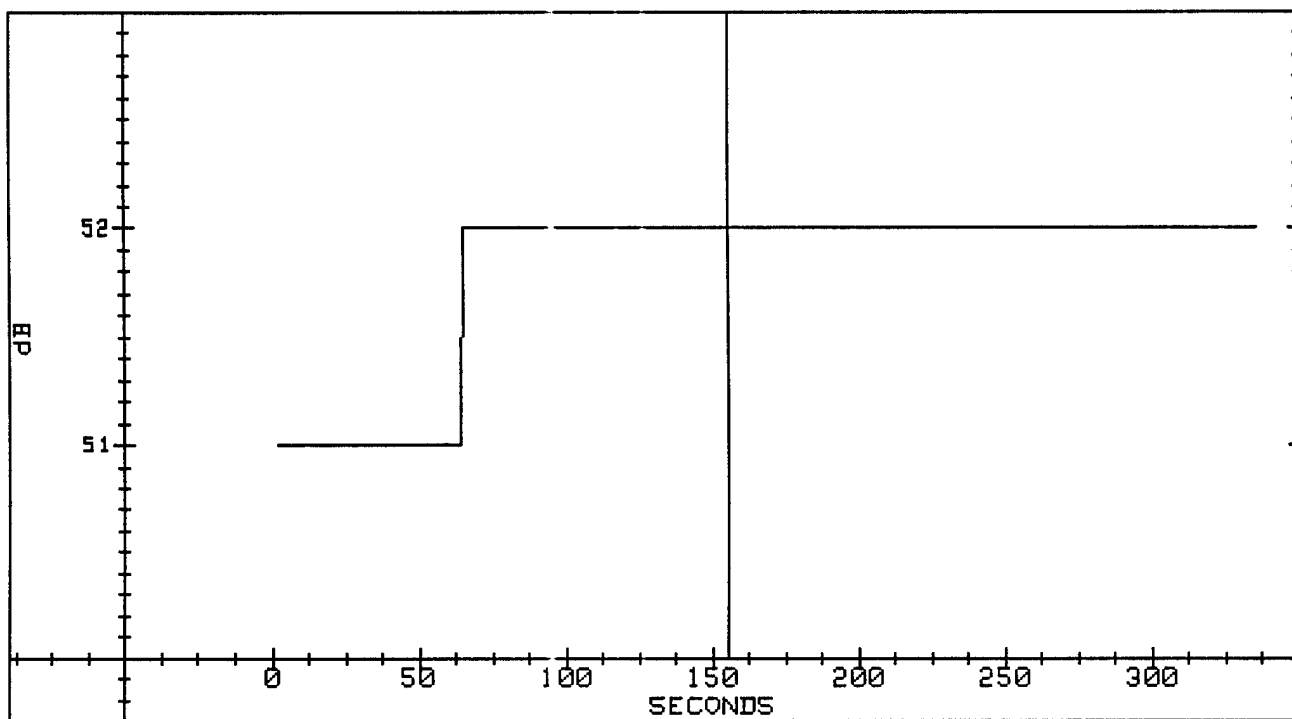
PASS 10

m= -.399, sd= .500653



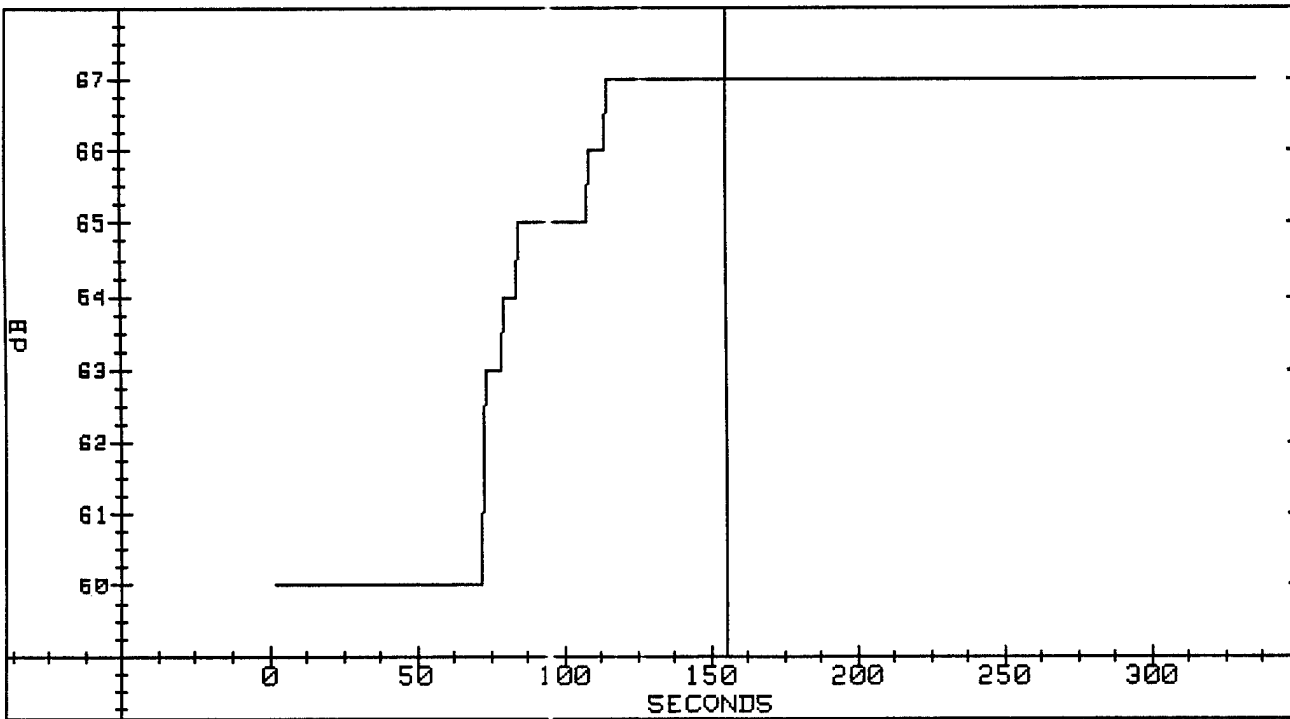
Ch1 RES Attenuation

DAY 179 TIME 1:10 PASS 10 m= 52, sd= 0



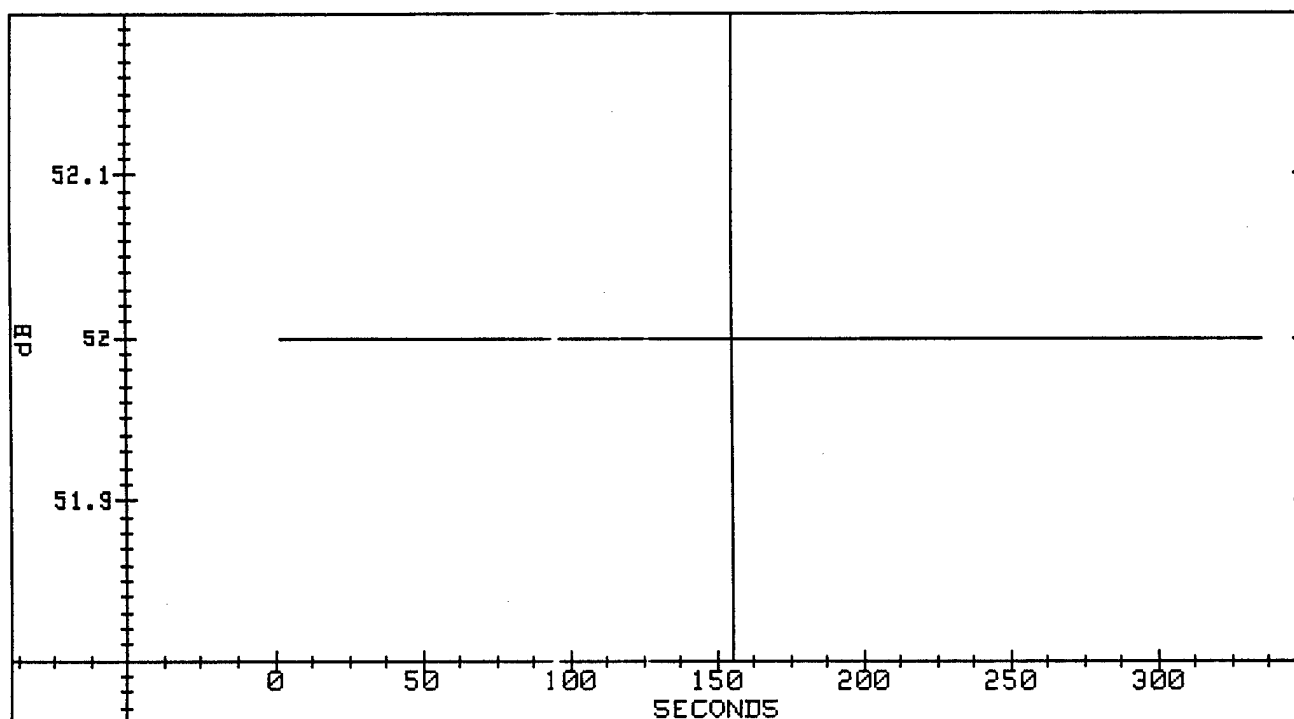
Ch2 RES Attenuation

DAY 179 TIME 1:10 PASS 10 m= 67. sd= 0



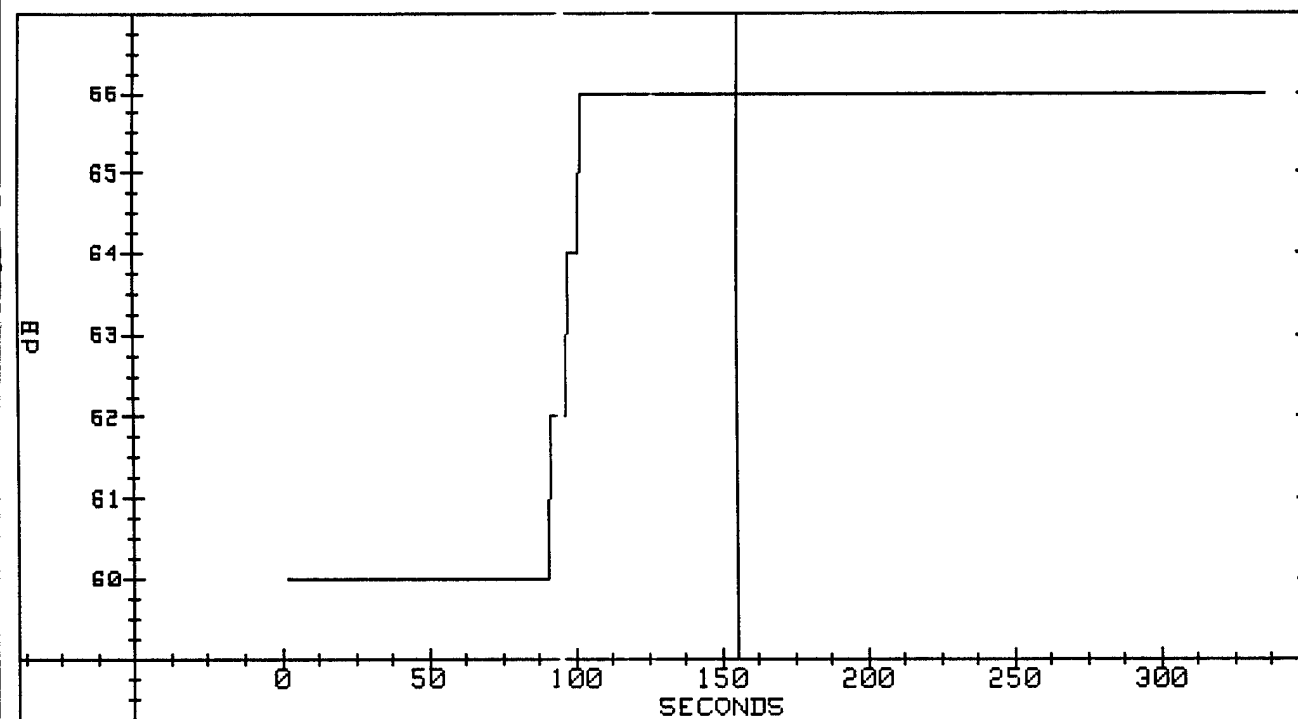
Ch3 RES Attenuation

DAY 179 TIME 1:10 PASS 10 m= 52. sd= 0



Ch4 RES Attenuation

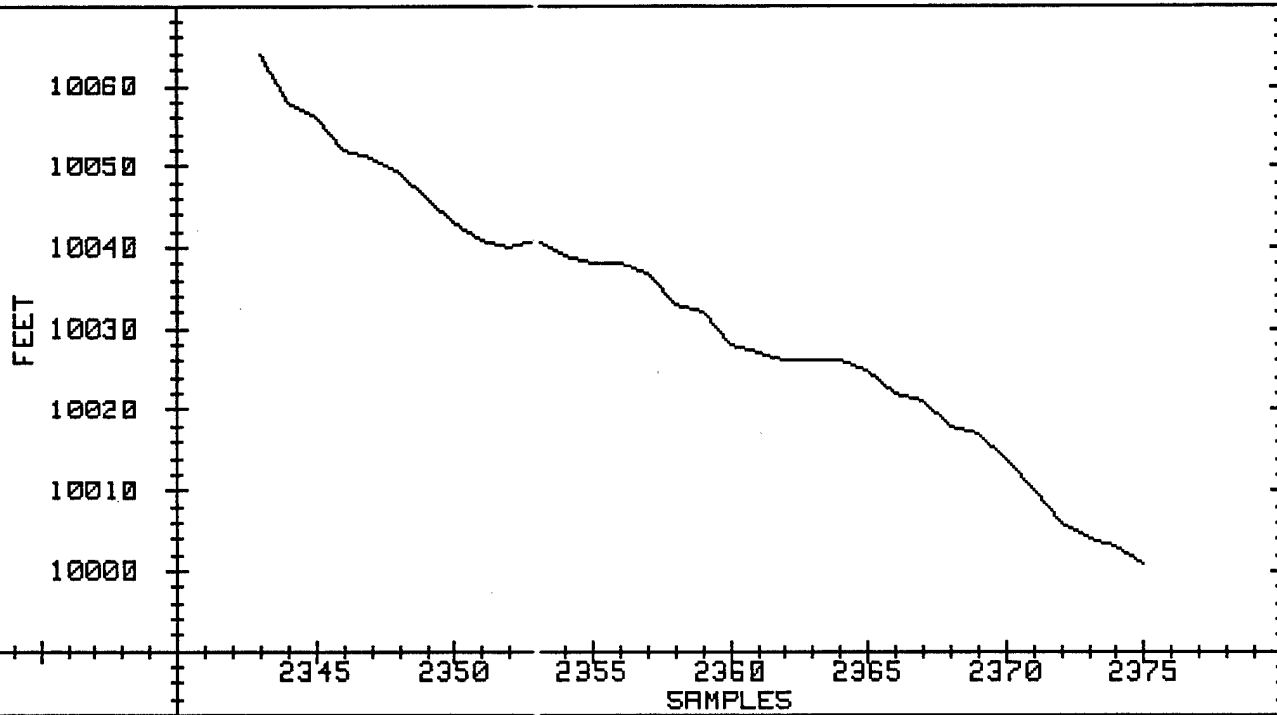
DAY 179 TIME 1:10 PASS 10 m= 66, sd= 0



## GPS ALTITUDE

MEAN= 10031.3    STANDARD DEVIATION= 16.4303

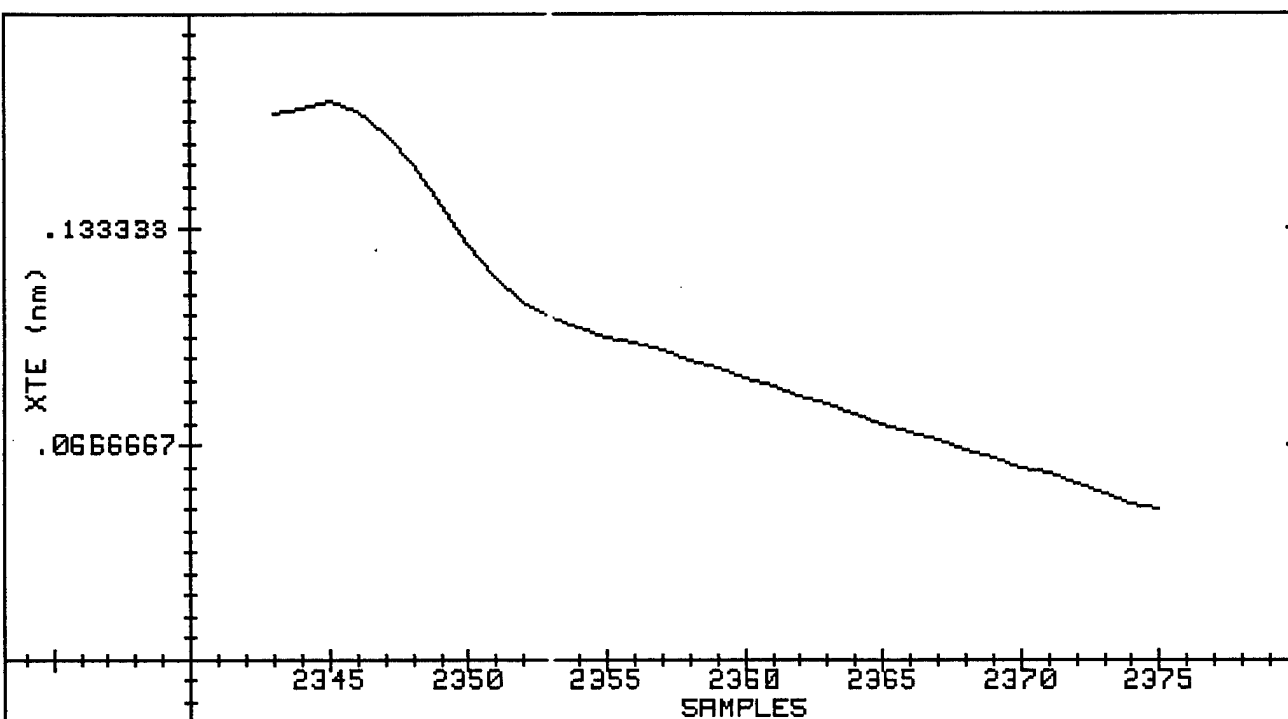
DATE: June 27, 1995    PASS 18

OFF  
ON  
BAR

GPS Cross Track Error

MEAN= .0986364 STANDARD DEVIATION= .0389217

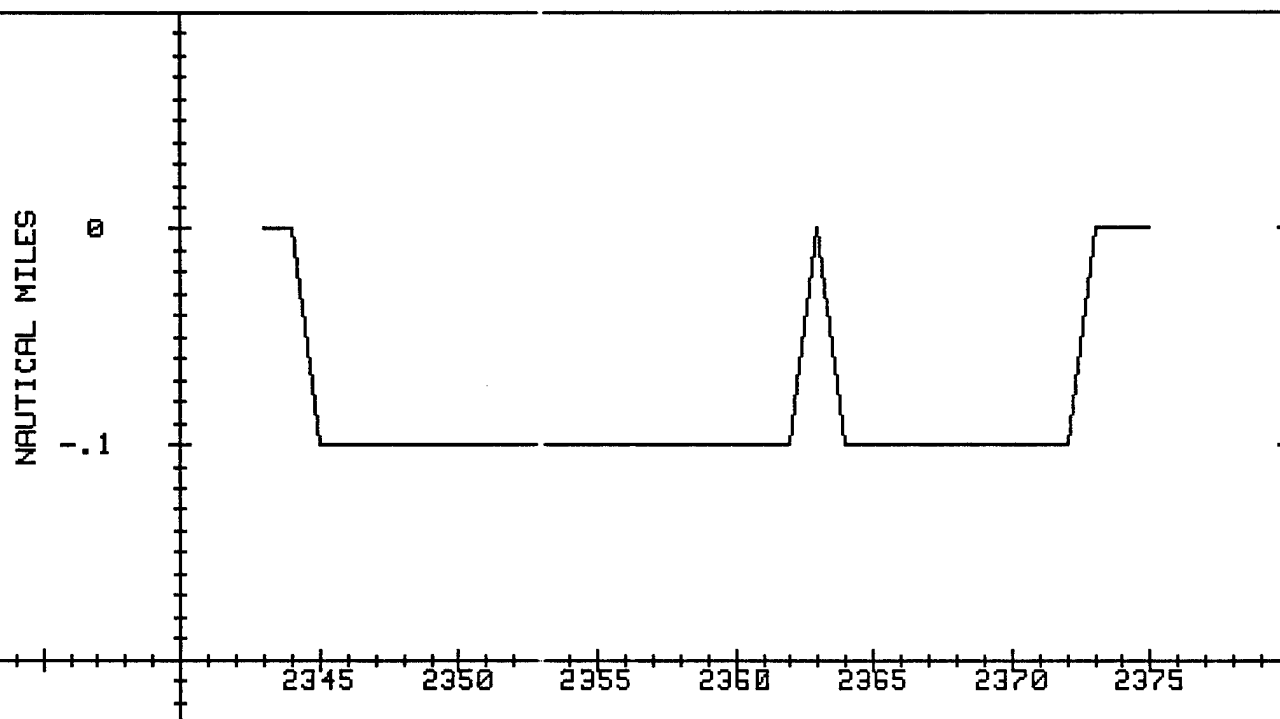
DATE: June 27, 1995 PASS 18



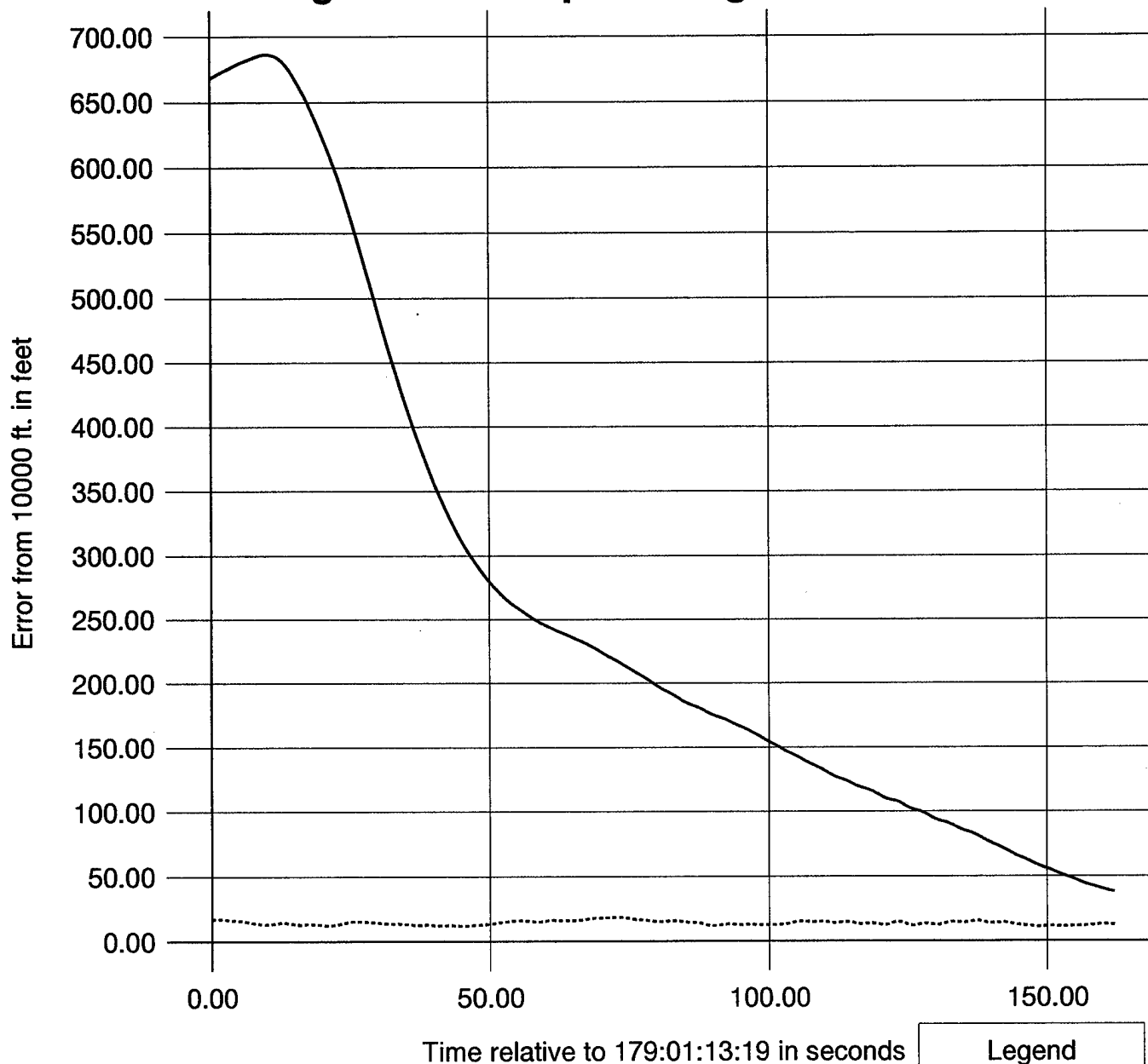
INS CROSS TRACK ERROR

MEAN- -.0018182 STANDARD DEVIATION- .0385695

DATE: June 27, 1995 PASS 18



# Portage, ME - June 27, 1995 - Pass 18 - Xtk. and Alt. Errors Higher alt. and port are greater than zero



	Mean	St. Dev.
ALT.	14.13	1.70
XTK.	264.29	202.94

Legend	
—	P5-xt
.....	P5-alt

28 Jun 1995  
Tape: E1440

Post-line Data Sheet  
Line 29  
Mission: Presque Isle DAY 3

Time: 179:01:26:37  
Pass 19  
Req.# 15

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	10000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	9886 ft s.d. =	2 Swath Ctr Ang:	30.0°	30.0°	30.0°	30.0°
Slt. rng:	18460 ft	Tgt Dep Ang:	30.0°	30.0°	30.0°	30.0°
Look:	Right	St rng (ft):	16922	16922	16922	16922
Depr Ang:	25.0°	Near Rng Dep:	35.7°	35.7°	35.7°	35.7°
Des. trk:	120.0°	Far Rng Dep:	17.4°	17.4°	17.4°	17.4°
Start Sq:	90.0°	Atten (dB):	52.0	59.0	51.0	60.0
End Sq:	90.0°	RMS Video (%FS)	25.6	25.7	20.4	26.1

#### WAYPOINTS

Line up:	N 46:54.86	W 68:48.54	Main Target:	IE
Start:	N 46:48.89	W 68:33.37	Mocomp Point:	
End:	N 46:43.89	W 68:20.78	Lat:	N 46:44.12
			Long:	W 68:28.98
From:	N 52:47.33	W 92:35.12	Tgt Trk:	0.0
To:	N 36:51.34	W 50:24.96	Tgt Vel:	0.0
			Alt:	770.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	->	10 sec
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)	
Swath width:	Single	Ave Gndspd: Real	->	248.4 kts
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4	
Position Reference:	ON	GPS Vel/Pos Reference		
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft	
Range Gate Delta:	0.0 ft	Range Tracking is	OFF	
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF	
TX Chirp Filename:	CTLU2B	RX Chirp Filename:	CRL1N0A	
Ave Ref Vel ->	-1.5 fps (s.d.= .9)			
Ave Fil Vel ->	2.5 fps (s.d.= .9)			

NML XMIT PWR	ANG BIAS	Tape Footage	Drive no.
X: -70.0	Elevation: 0.0°	Starting: 9097 ft	(2)
L: -70.0	Azimuth: 0.0°	Ending: 10356 ft	(2)
C: -70.0	Pitch: 0.0°		
P: 40.2			

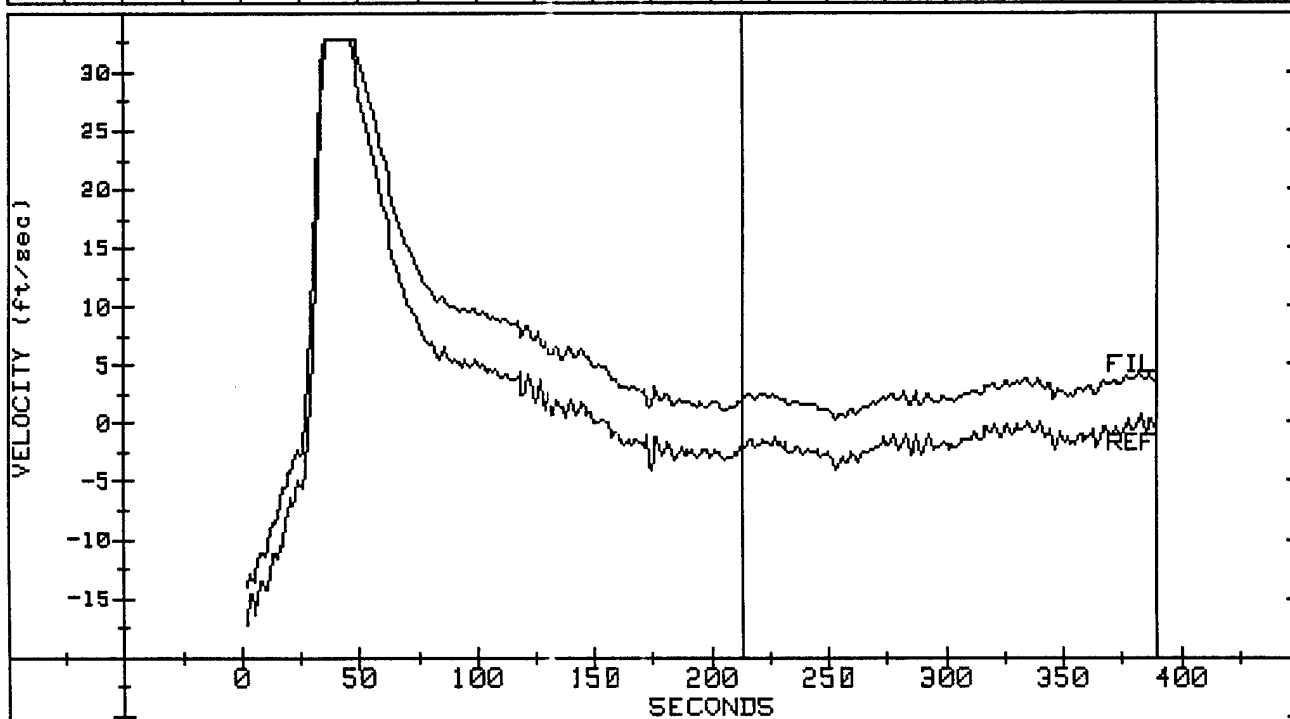
Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 2079.0	X: 63.8 dB	Start: 01:26:37
Y: 1867.0	L: 63.8 dB	End: 01:29:21
Z: 17142.0	C: 63.8 dB	

#### Mocomp Counters

Start:	1131299	00114323h	CPA (UCT):	00:00:00
End:	1158804	0011AE94h	Alt:	0 ft (GPS)
			Lat:	N 0:00: 0
			Lon:	E 0:00: 0

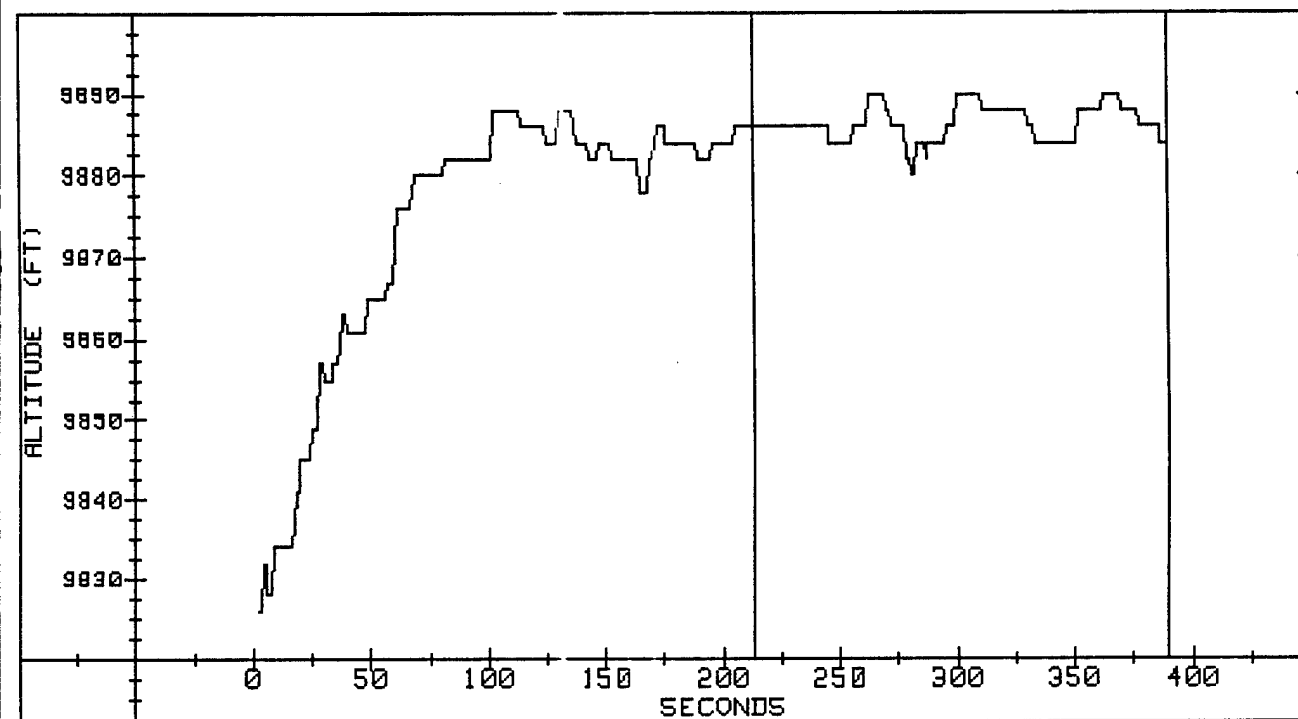
FILTERED vs. REF. VELOCITY  
DAY 179 TIME 1:22 PASS 19

INS  
LORAN  
GPS



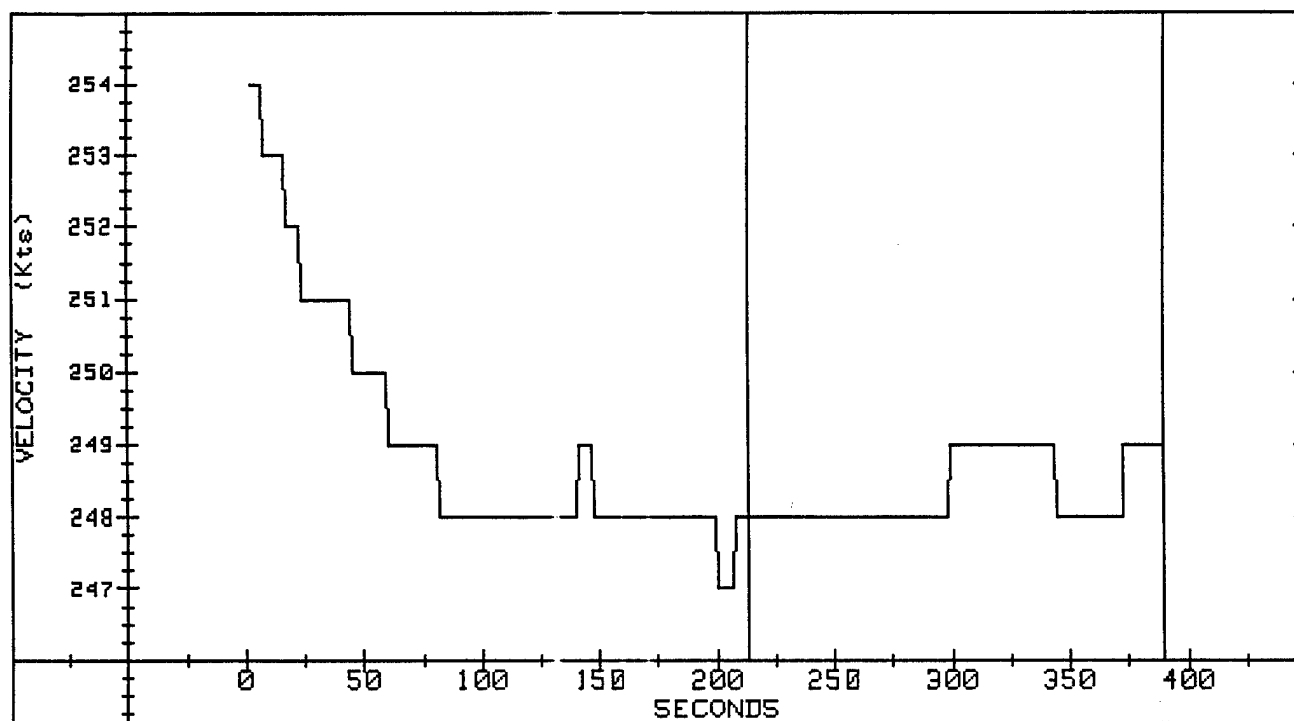
BARO ALTITUDE

DAY 179 TIME 1:22 PASS 19 m= 9886, sd= 2.2401



## INS GROUND SPEED

DAY 179 TIME 1:22 PASS 19 m= 248.4, sd= .485B32



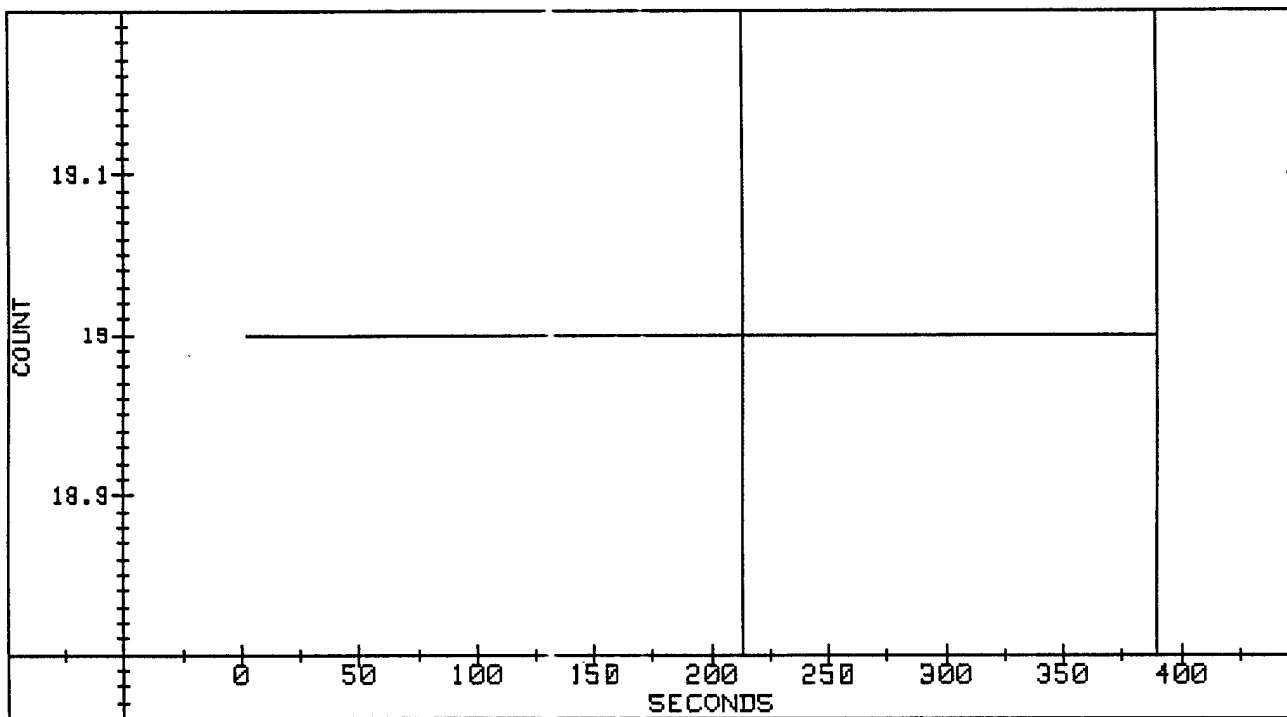
# PASS NUMBER

DAY 179

TIME 1:22

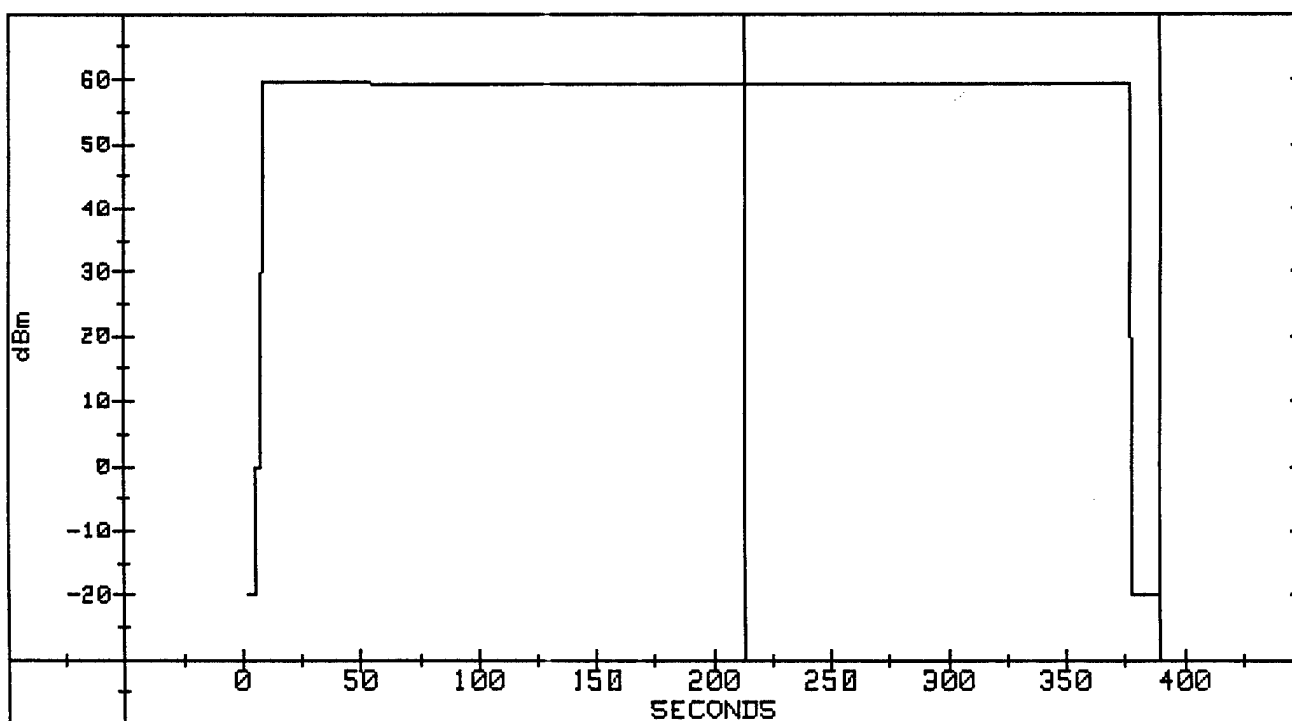
PASS 19

m= 19, sd= 0



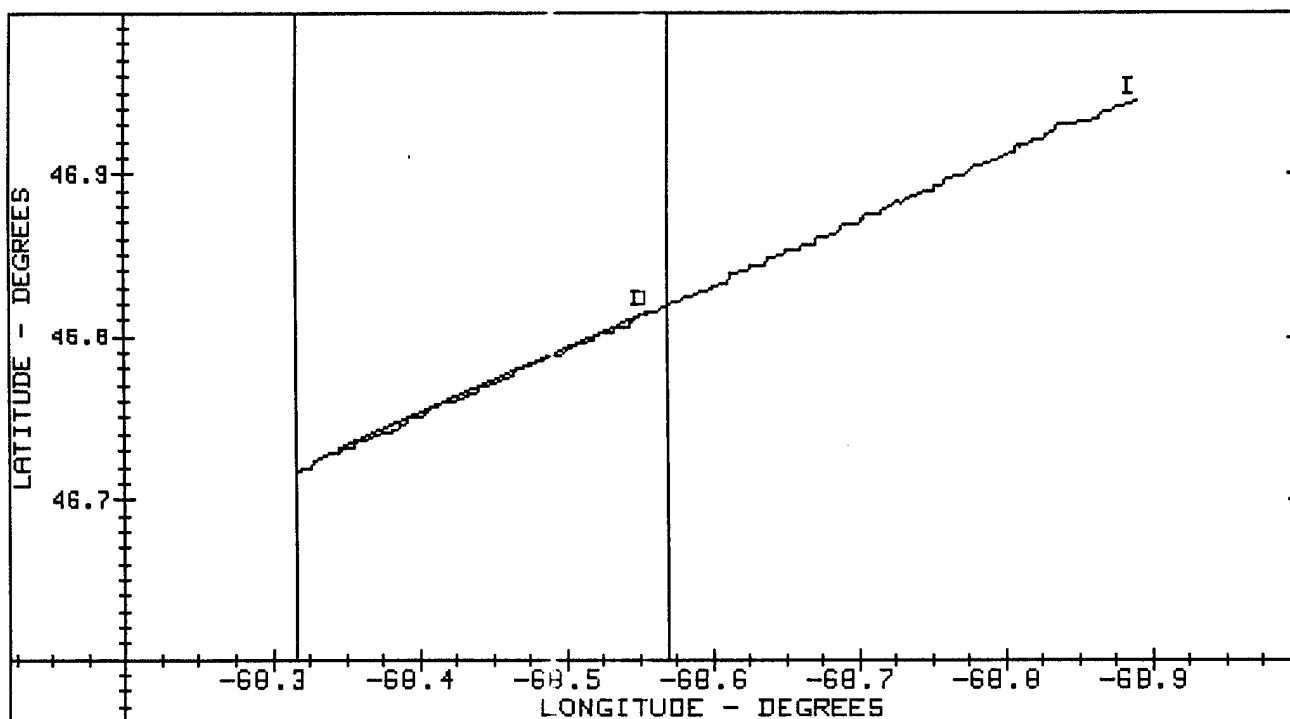
P Band Power

DAY 179 TIME 1:22 PASS 19 m= 53.03, sd= 21.358



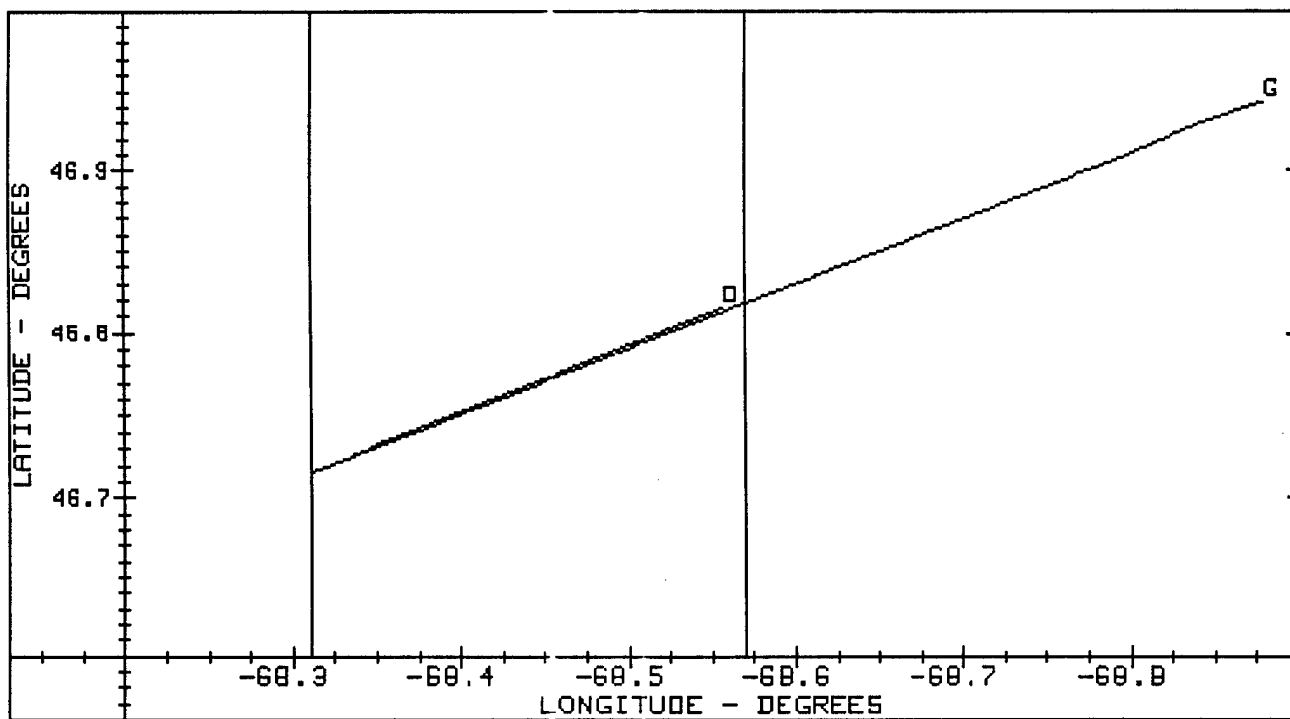
INS AIRCRAFT POSITION

DAY 179 TIME 1:22 PASS 19



GPS AIRCRAFT POSITION

DAY 179 TIME 1:22 PASS 19



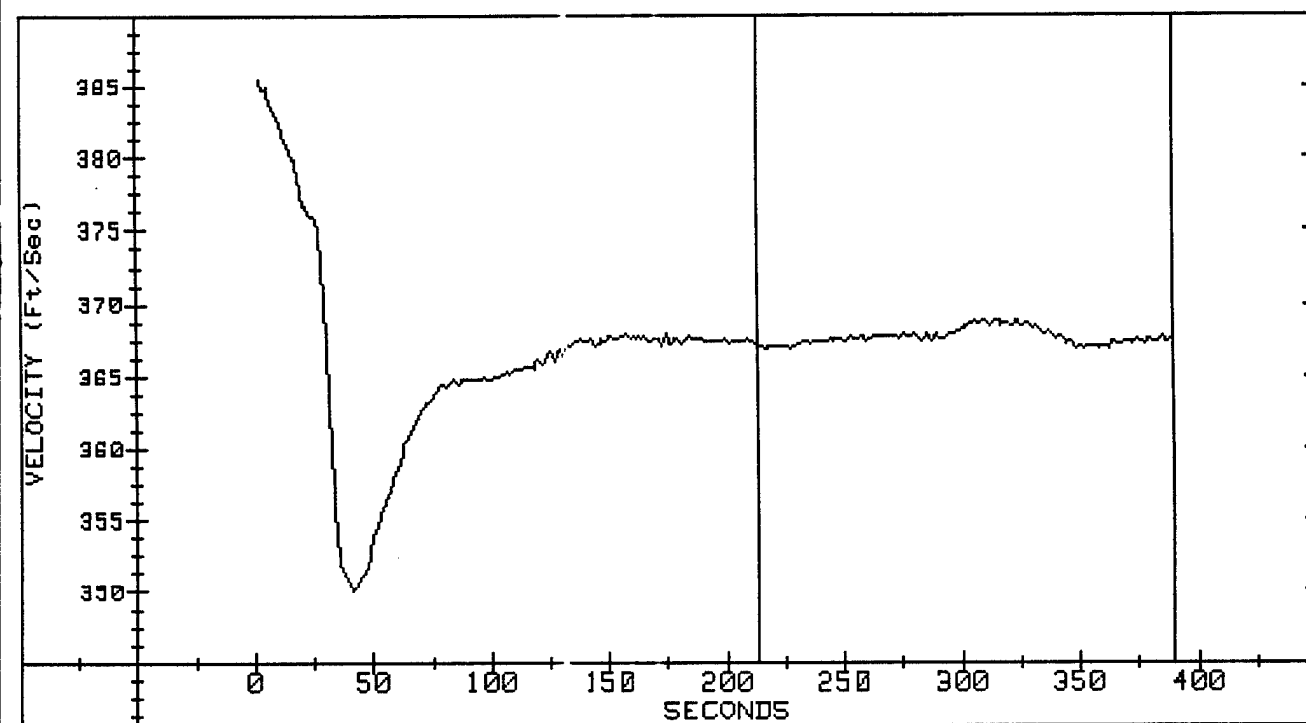
GPS V<sub>e</sub>

DAY 179

TIME 1:22

PASS 19

m= 367.8, sd= .518382



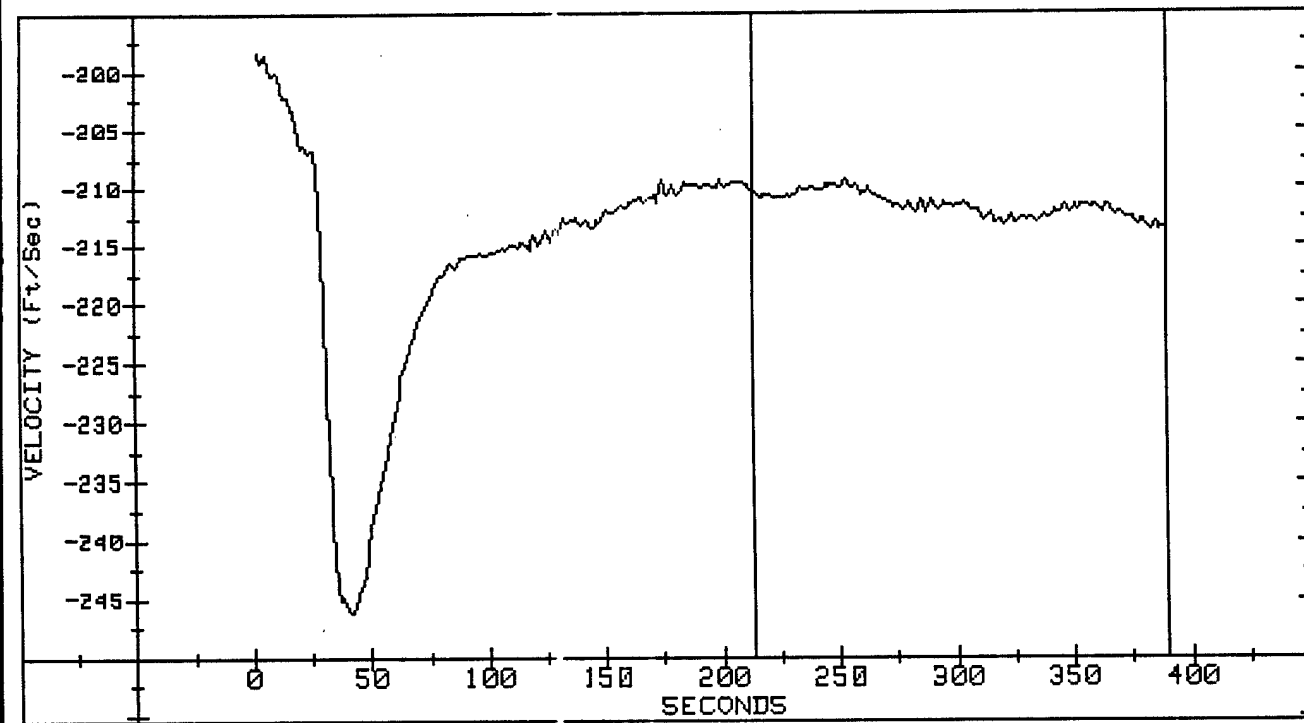
GPS Vn

DAY 179

TIME 1:22

PASS 19

m= -211.7, sd= 1.0502



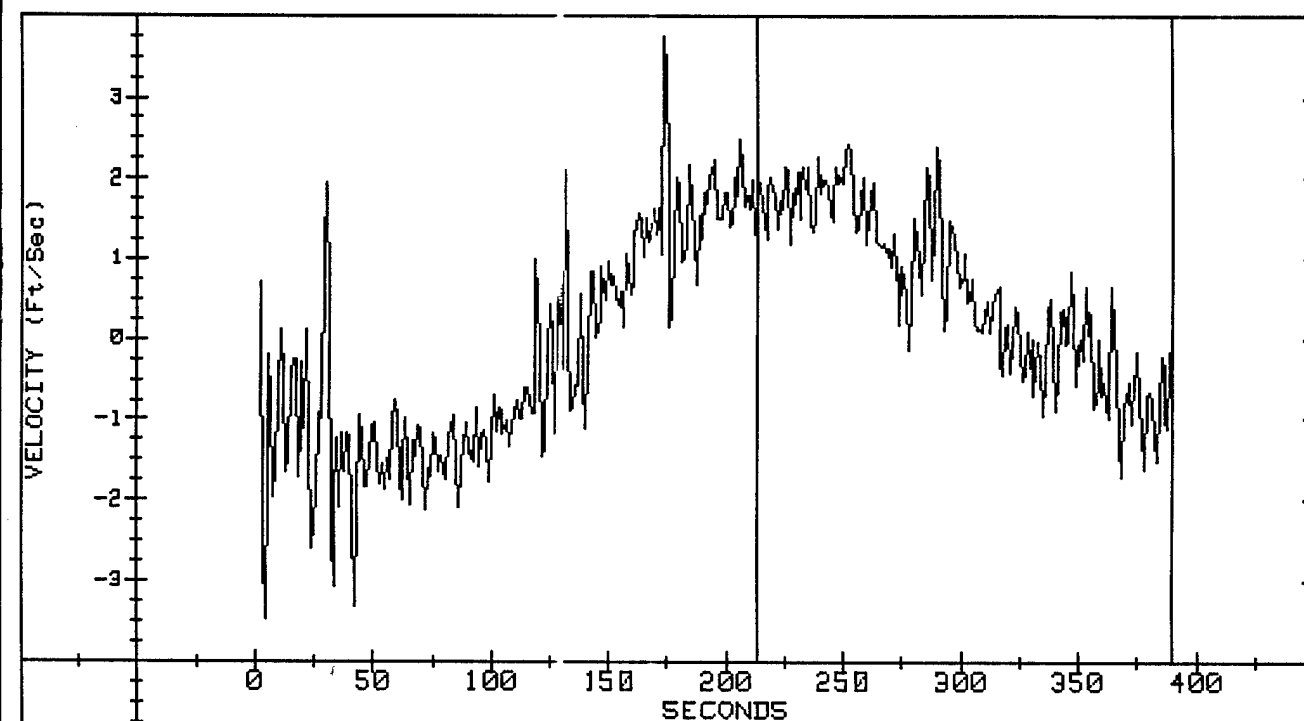
GPS Vv

DRY 179

TIME 1:22

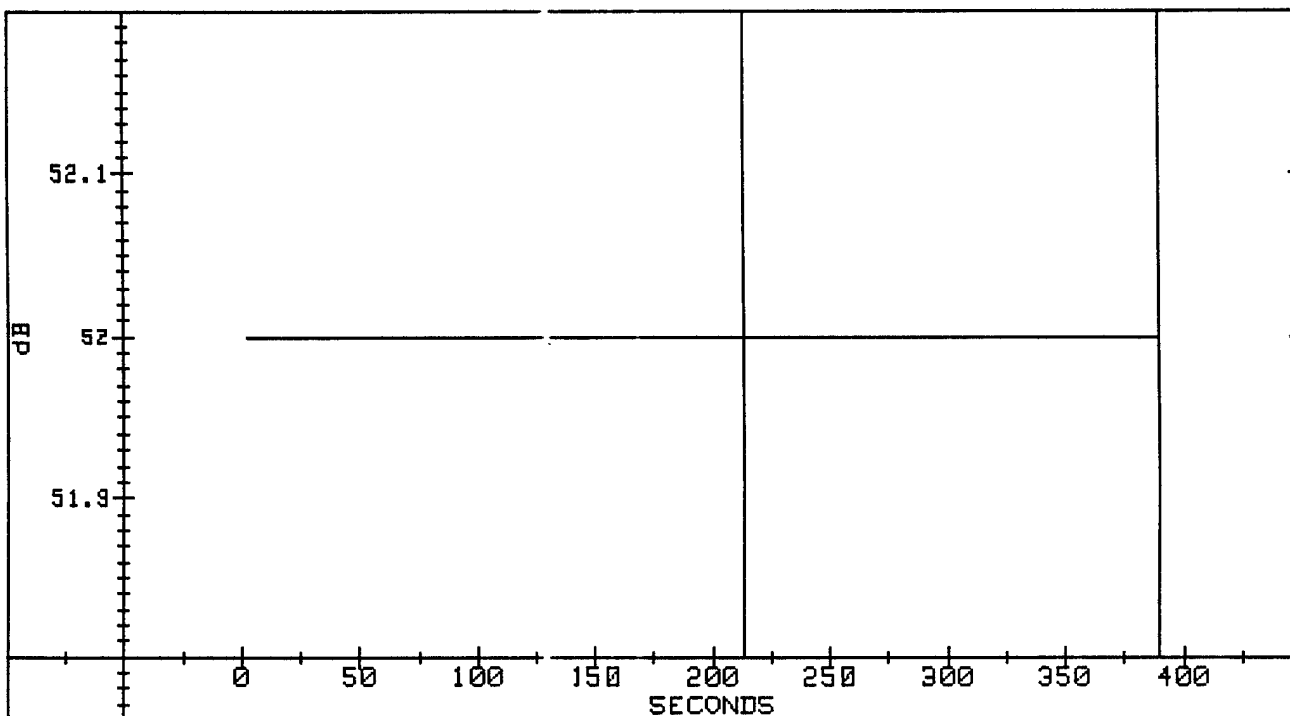
PASS 19

m= .5249, sd= 1.01436



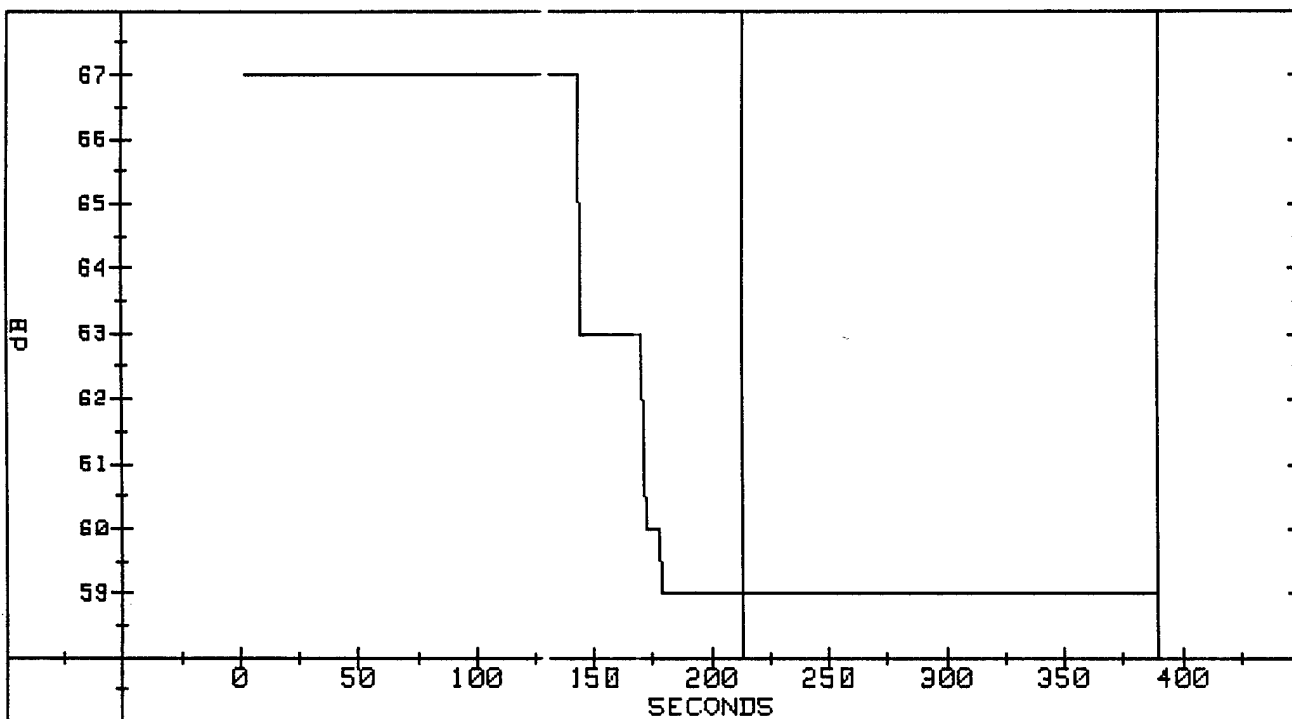
Ch1 RES Attenuation

DAY 179 TIME 1:22 PASS 19 m= 52, sd= 0



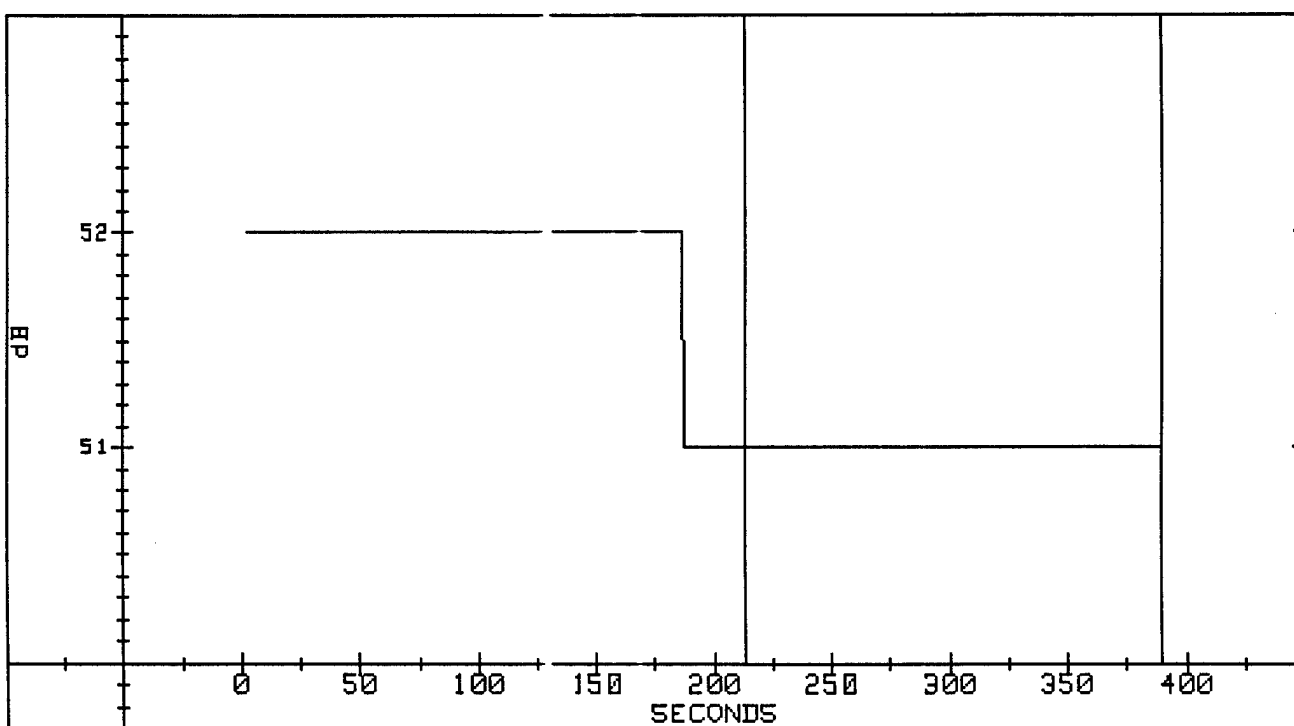
Ch2 RES Attenuation

DAY 179 TIME 1:22 PASS 19 m= 59, sd= 0



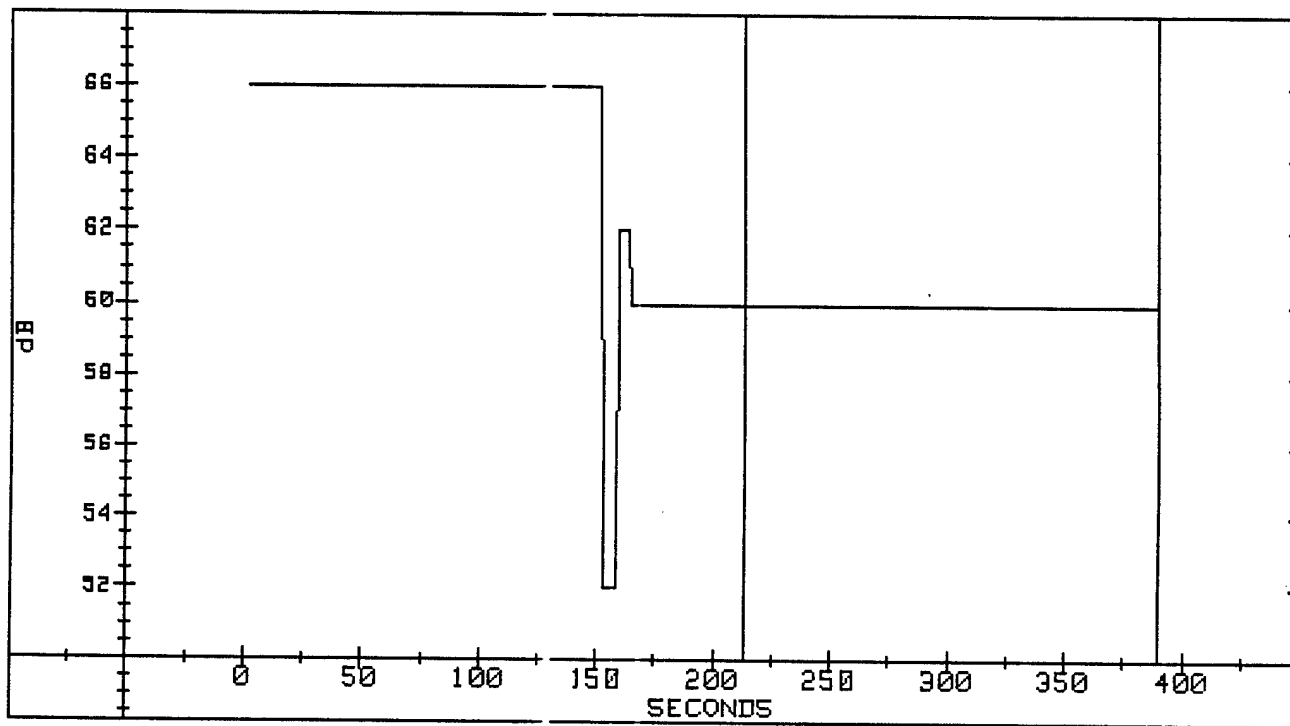
Ch3 RES Attenuation

DAY 179 TIME 1:22 PASS 19 m= 51. sd= 0



Ch4 RES Attenuation

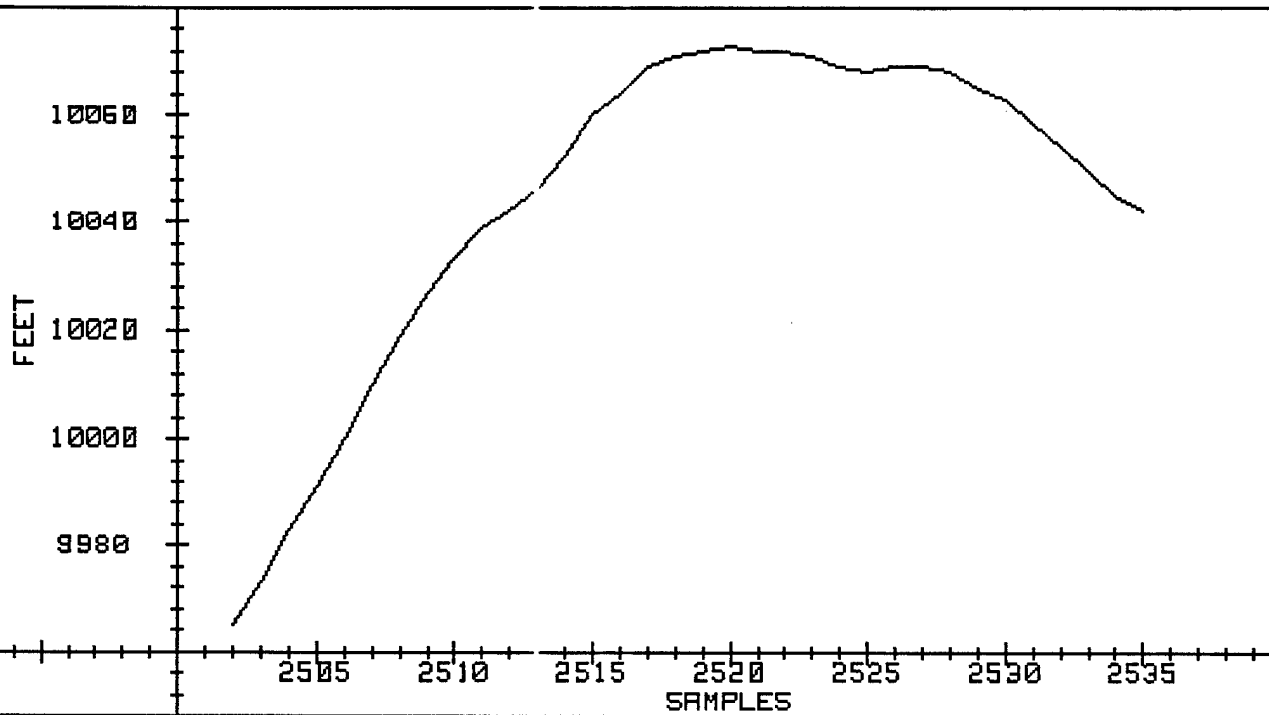
DAY 179 TIME 1:22 PASS 19 m= 60, sd= 0



## GPS ALTITUDE

MEAN= 10044.8 STANDARD DEVIATION= 30.7272

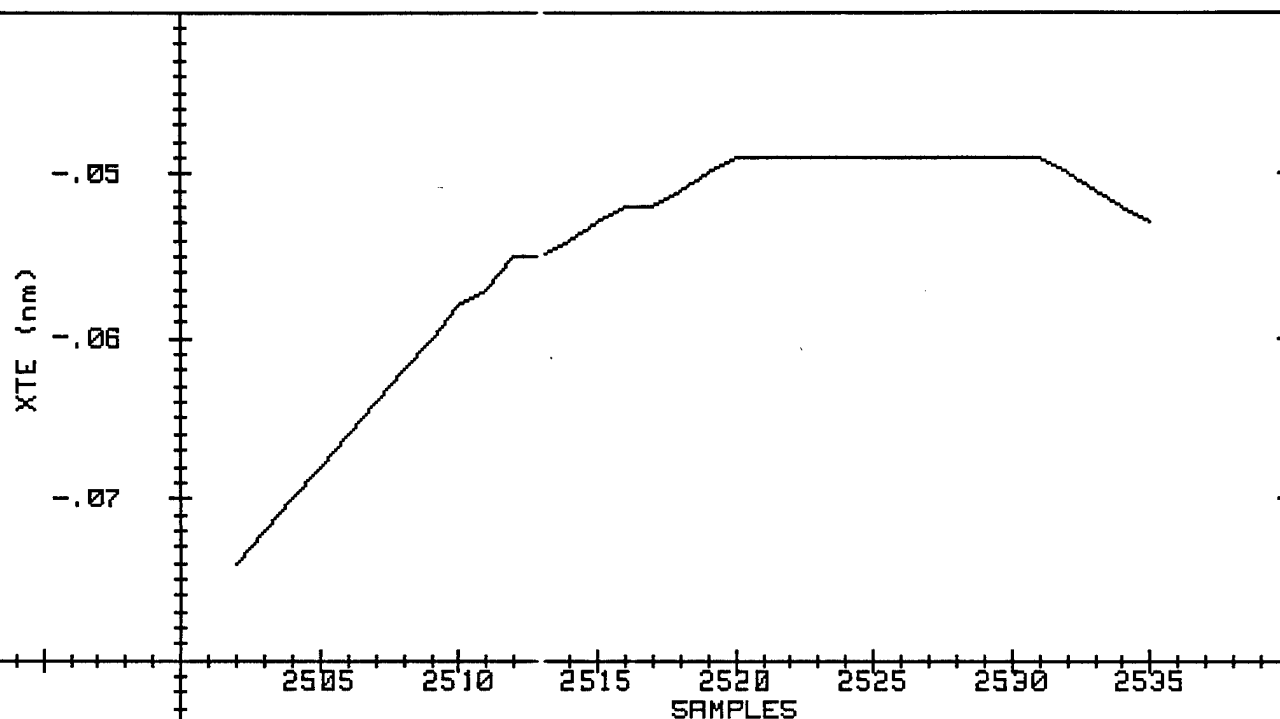
DATE: June 27, 1995 PASS 19

OFF  
ON  
BAR

GPS Cross Track Error

MEAN= -.0549118 STANDARD DEVIATION= .00744141

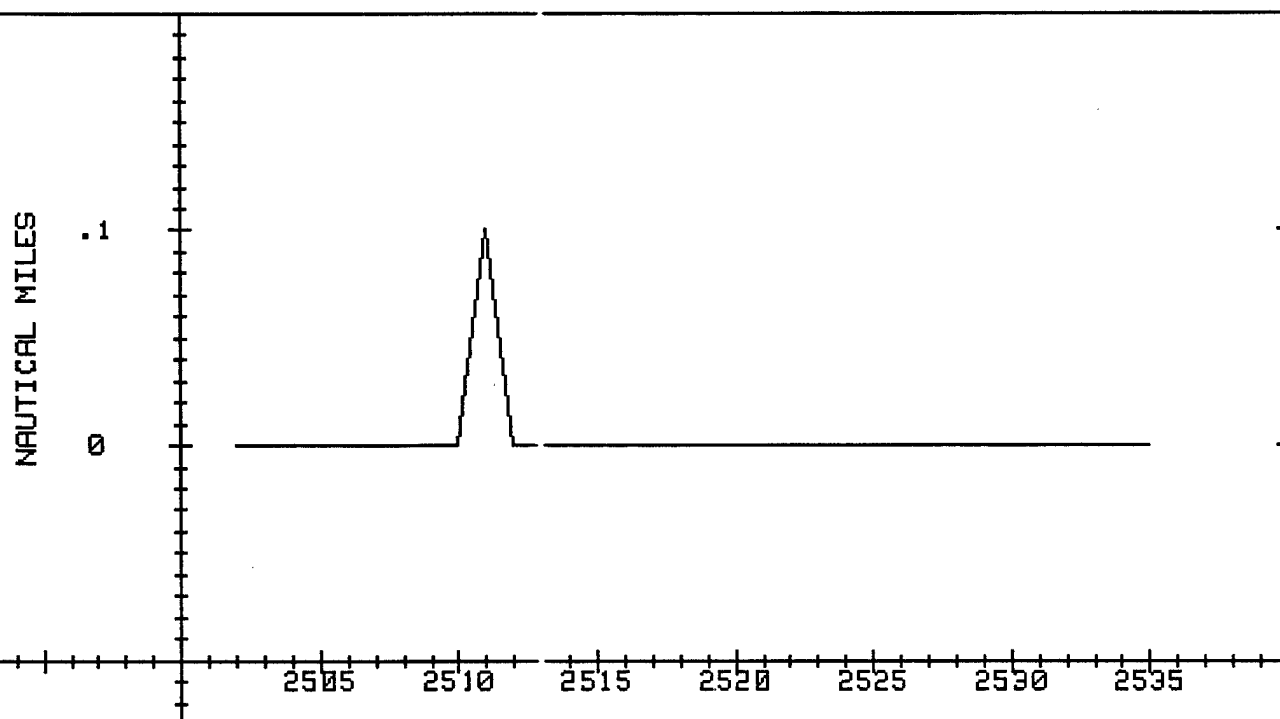
DATE: June 27, 1995 PASS 19



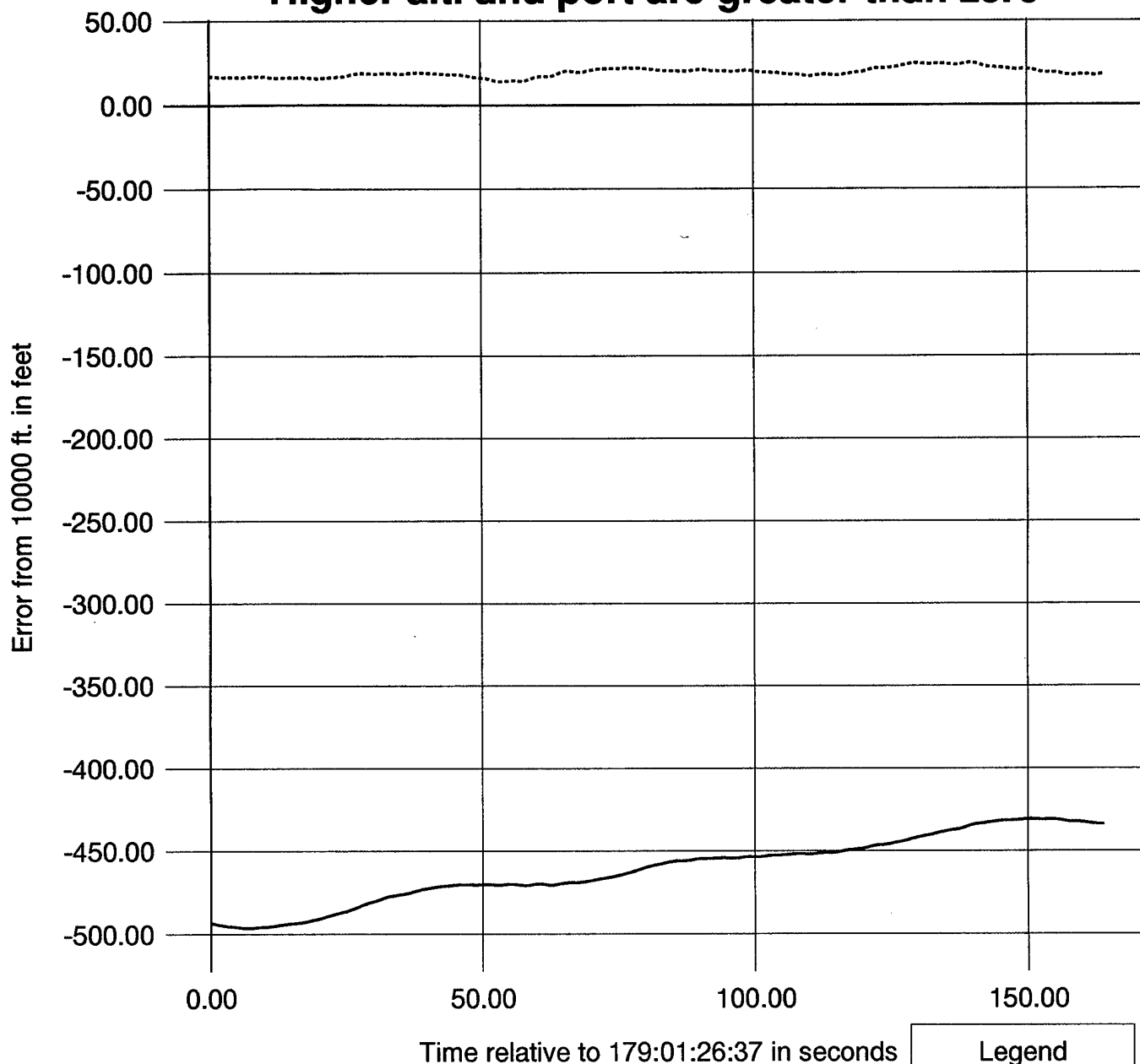
INS CROSS TRACK ERROR

MEAN- .00294118 STANDARD DEVIATION- .0168558

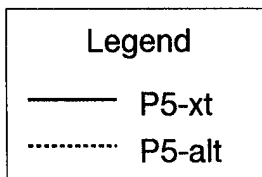
DATE: June 27, 1995 PASS 19



# Portage, ME - June 27, 1995 - Pass 19 - Xtk. and Alt. Errors Higher alt. and port are greater than zero



	Mean	St. Dev.
ALT.	19.13	2.56
XTK.	-461.08	19.84



28 Jun 1995  
Tape: 1441

Post-line Data Sheet  
Line 31  
Mission: Presque Isle DAY 3

Time: 179:01:36:25  
Pass 20  
Req.# 16

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	10000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	9900 ft s.d. =	2 Swath Ctr Ang:	30.0°	30.0°	30.0°	30.0°
Slt. rng:	18460 ft	Tgt Dep Ang:	30.0°	30.0°	30.0°	30.0°
Look:	Right	St rng (ft):	16922	16922	16922	16922
Depr Ang:	25.0°	Near Rng Dep:	35.8°	35.8°	35.8°	35.8°
Des. trk:	300.0°	Far Rng Dep:	17.4°	17.4°	17.4°	17.4°
Start Sq:	90.0°	Atten (dB):	57.0	61.0	57.0	64.0
End Sq:	90.0°	RMS Video (%FS)	22.3	18.2	19.9	15.8

#### WAYPOINTS

	Latitude	Longitude
Line_up:	N 46:33.32	W 68:09.55
Start:	N 46:39.35	W 68:24.60
End:	N 46:44.34	W 68:37.19
From:	N 36:47.45	W 50:29.32
To:	N 52:42.60	W 92:36.70

Main Target: IE  
Mocomp Point:  
Lat: N 46:44.12  
Long: W 68:28.98  
Tgt Trk: 0.0 Tgt Vel: 0.0  
Alt: 770.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel: 1	Filter damping is Hi -> 10 sec
Resolution: N/A	PRF Factor is FAST (262.5 kts)
Swath width: Single	Ave Gndspd: Real -> 252.0 kts
RMS Time Constant: 2^7	Mocomp Off for Chnl 1, 2, 3, 4
Position Reference: ON	GPS Vel/Pos Reference
Atten. Tracking: OFF	Adj Gnd Scene: 5000.0 ft
Range Gate Delta: 0.0 ft	Range Tracking is OFF
Azimuth Presum Rate: Presum6	Clutterlock Reference: OFF
TX Chirp Filename: CTLAU2B	RX Chirp Filename: CRL1NOA

Ave Ref Vel -> -2.6 fps (s.d.= 3.4)  
Ave Fil Vel -> 1.1 fps (s.d.= 2.9)

NML XMIT PWR	ANG BIAS	Tape Footage	Drive no.
X: -70.0	Elevation: 0.0°	Starting: 203 ft	(1)
L: -70.0	Azimuth: 0.0°	Ending: 1460 ft	(1)
C: -70.0	Pitch: 0.0°		
P: 40.2			

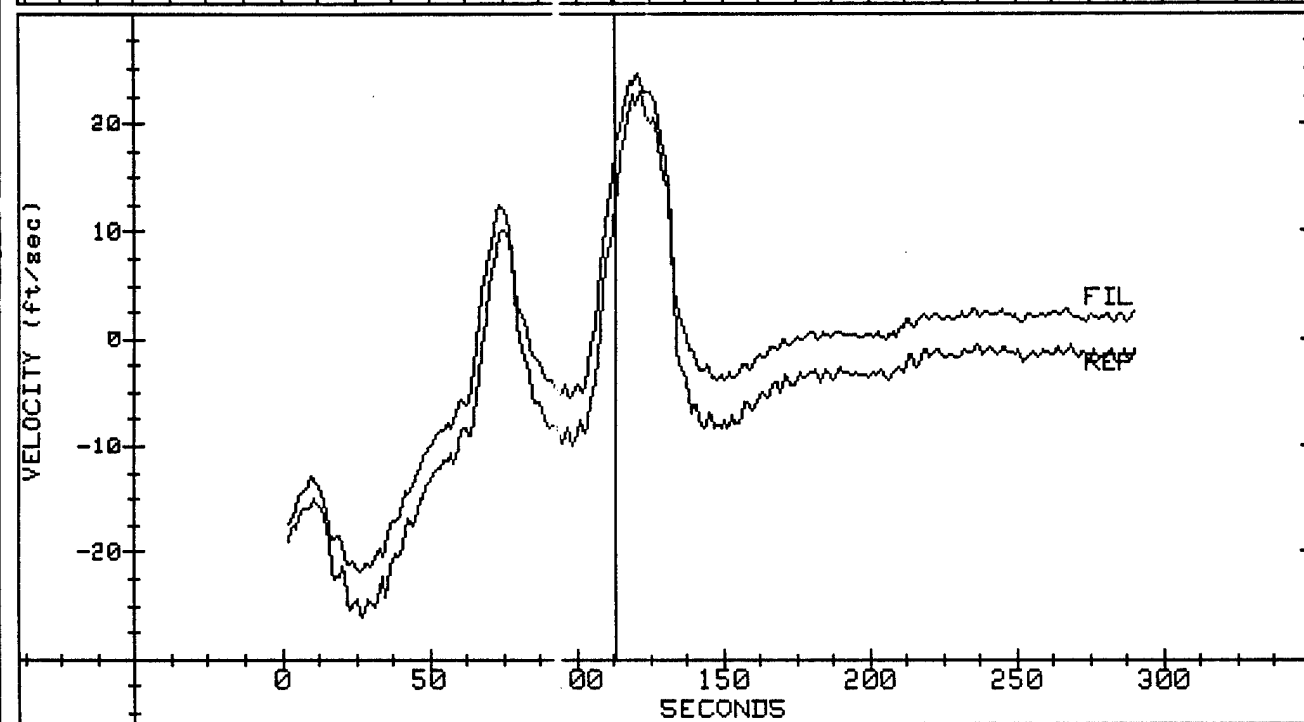
Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 2079.0	X: 63.8 dB	Start: 01:36:25
Y: 1867.0	L: 63.8 dB	End: 01:39:06
Z: 17142.0	C: 63.8 dB	

#### Mocomp Counters

Start:	1180490	0012034Ah	CPA (UCT): 00:00:00
End:	1207494	00126CC6h	Alt: 0 ft (GPS)
			Lat: N 0:00: 0
			Lon: E 0:00: 0

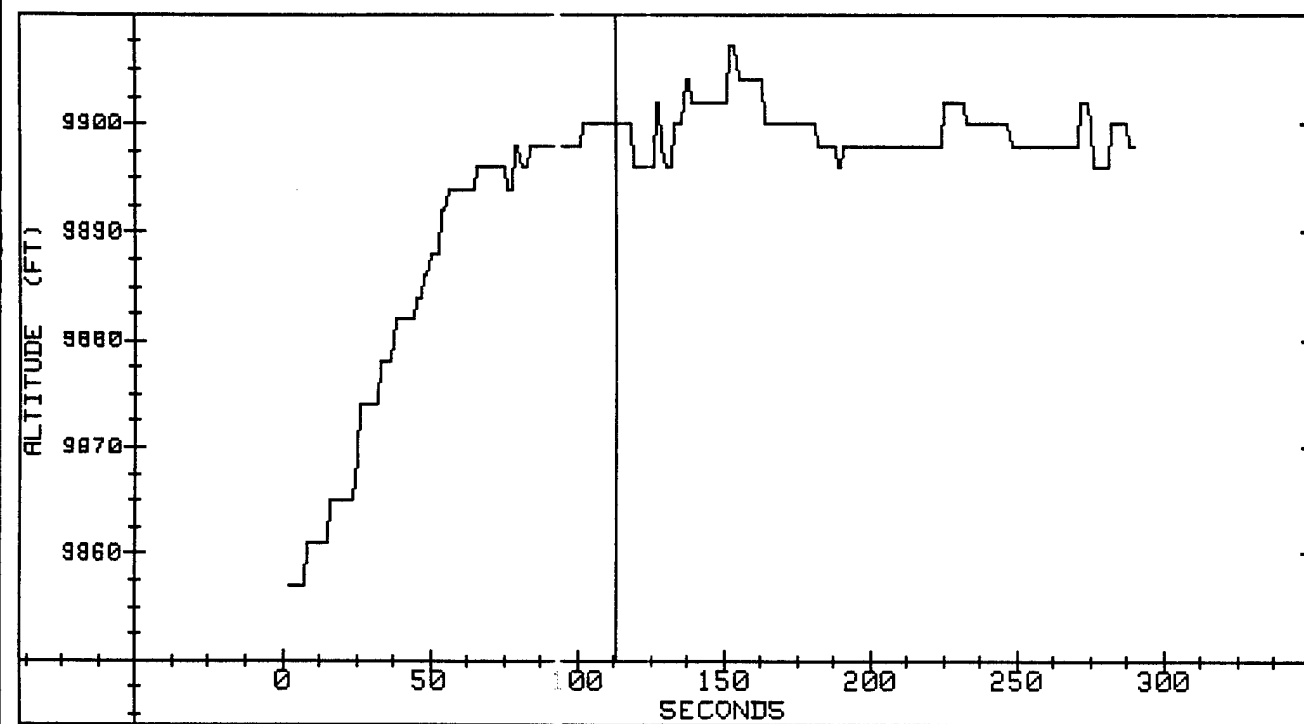
FILTERED vs. REF. VELOCITY  
DAY 179 TIME 1:34 PASS 20

ING  
LORAN  
GPS



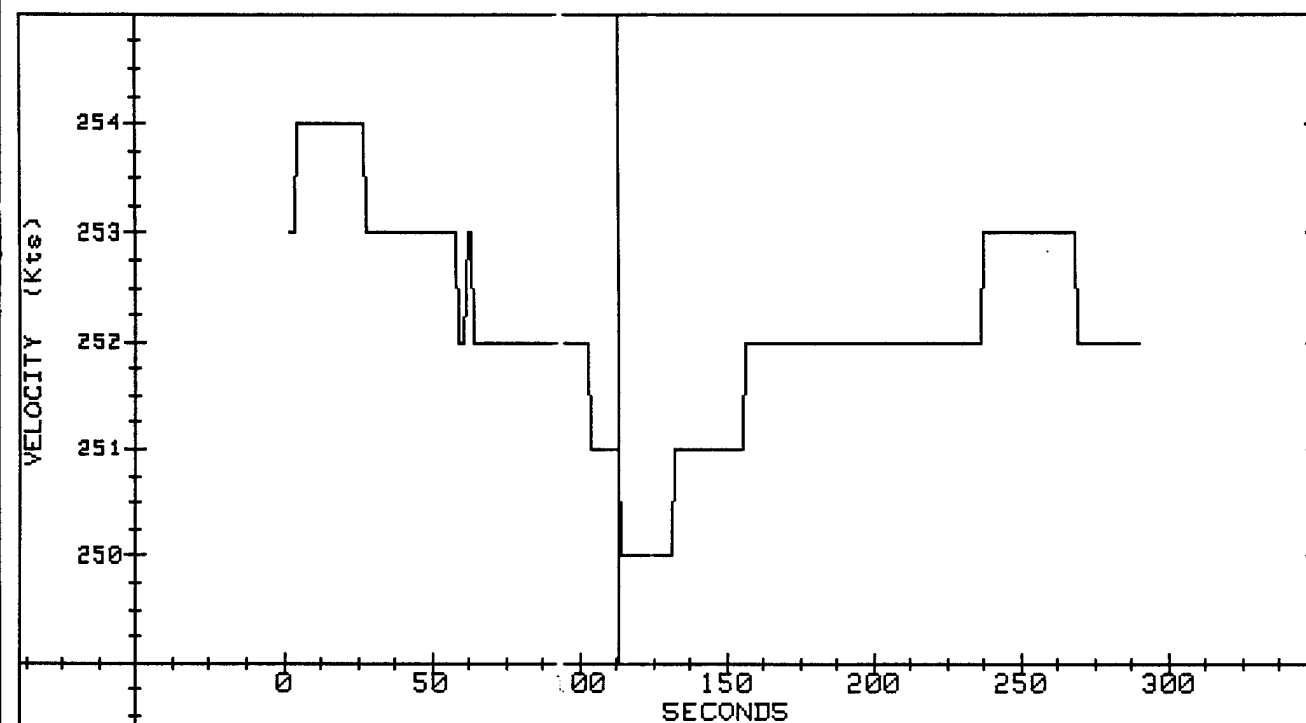
# BARO ALTITUDE

DAY 179 TIME 1:34 PAGE 20 m= 9900, sd= 2.27928



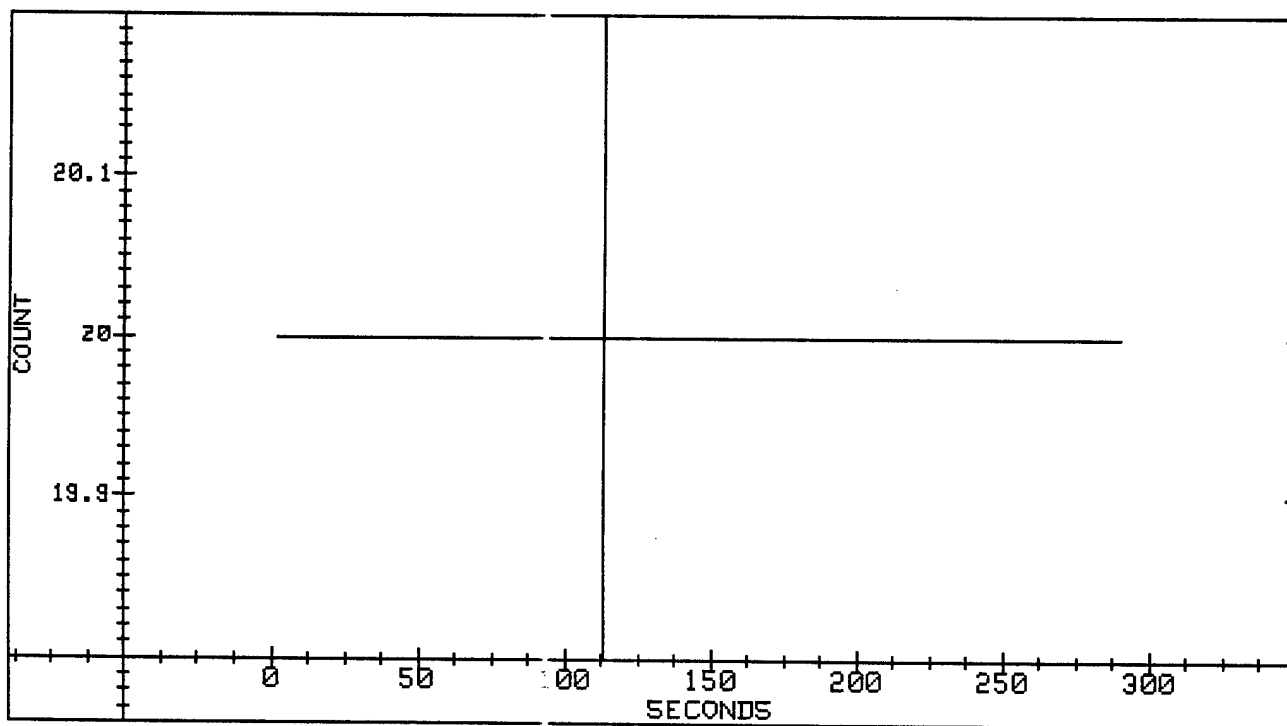
## INS GROUND SPEED

DAY 179 TIME 1:34 PASS 20 m= 252, sd= .647766



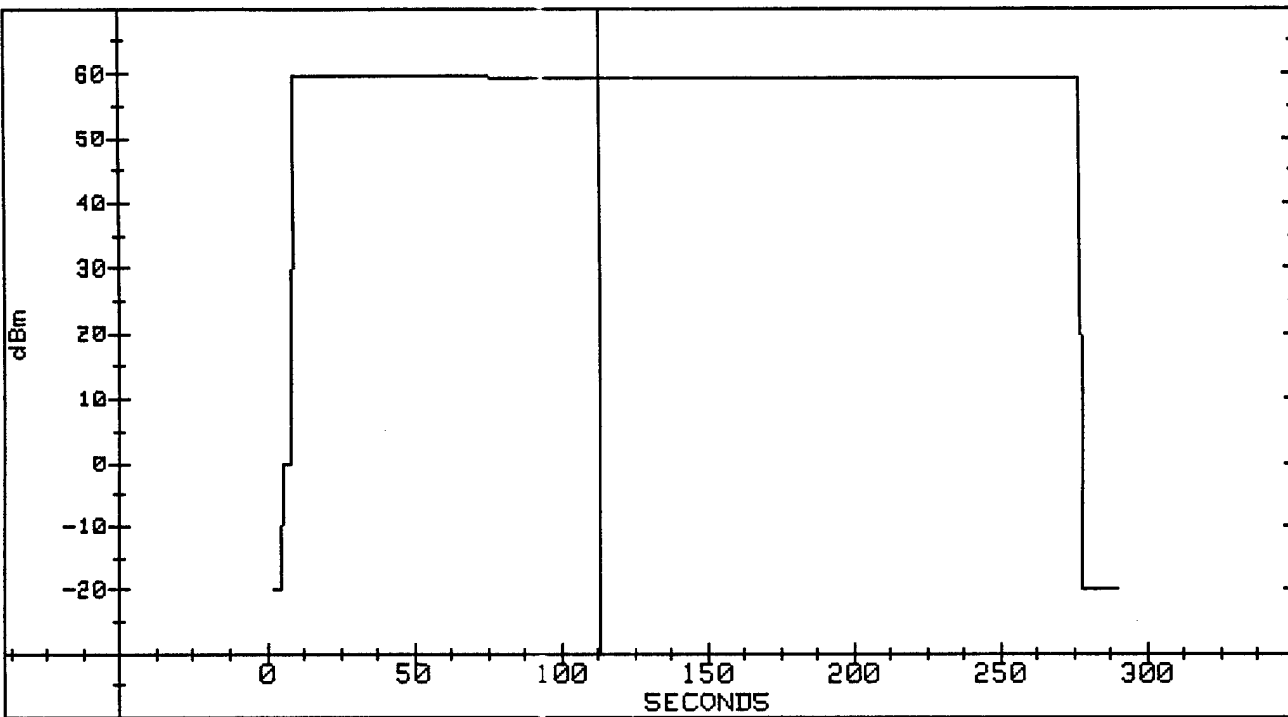
# PASS NUMBER

DAY 179 TIME 1:34 PASS 20 m- 20, sd- 0



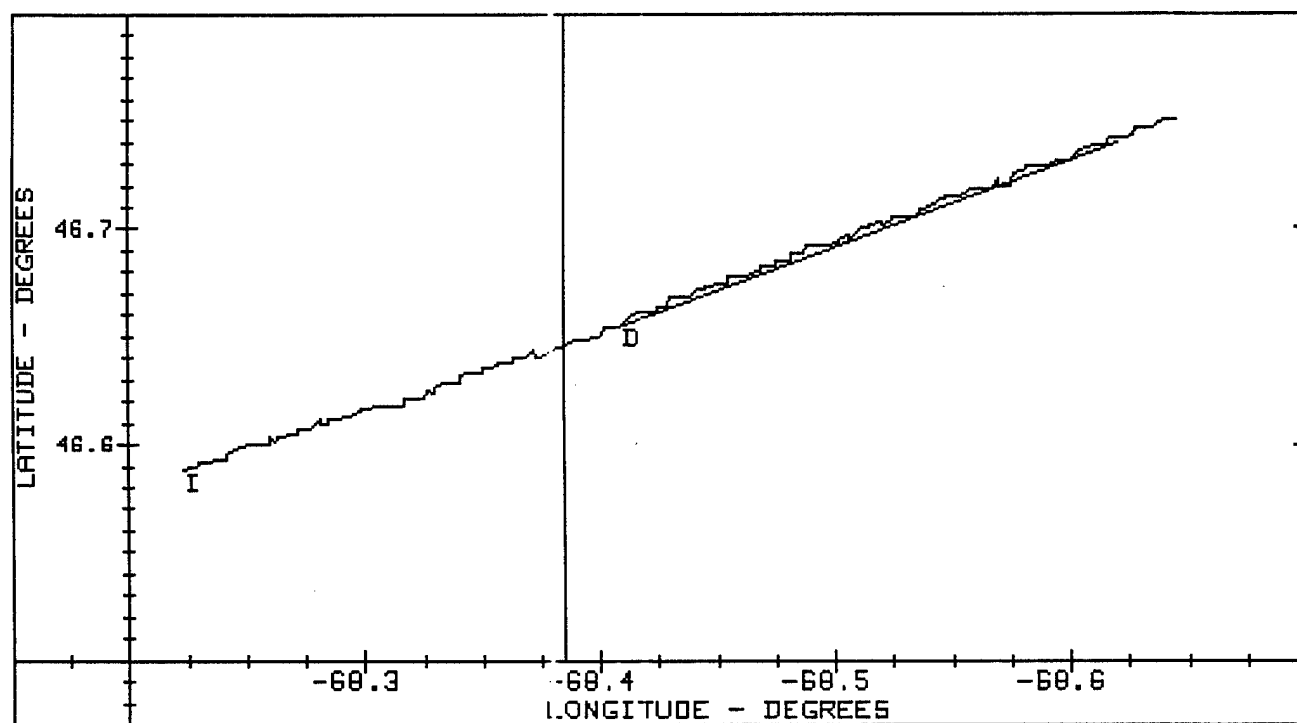
P Band Power

DAY 179 TIME 1:34 PASS 20 m= 52.98, sd= 21.5581



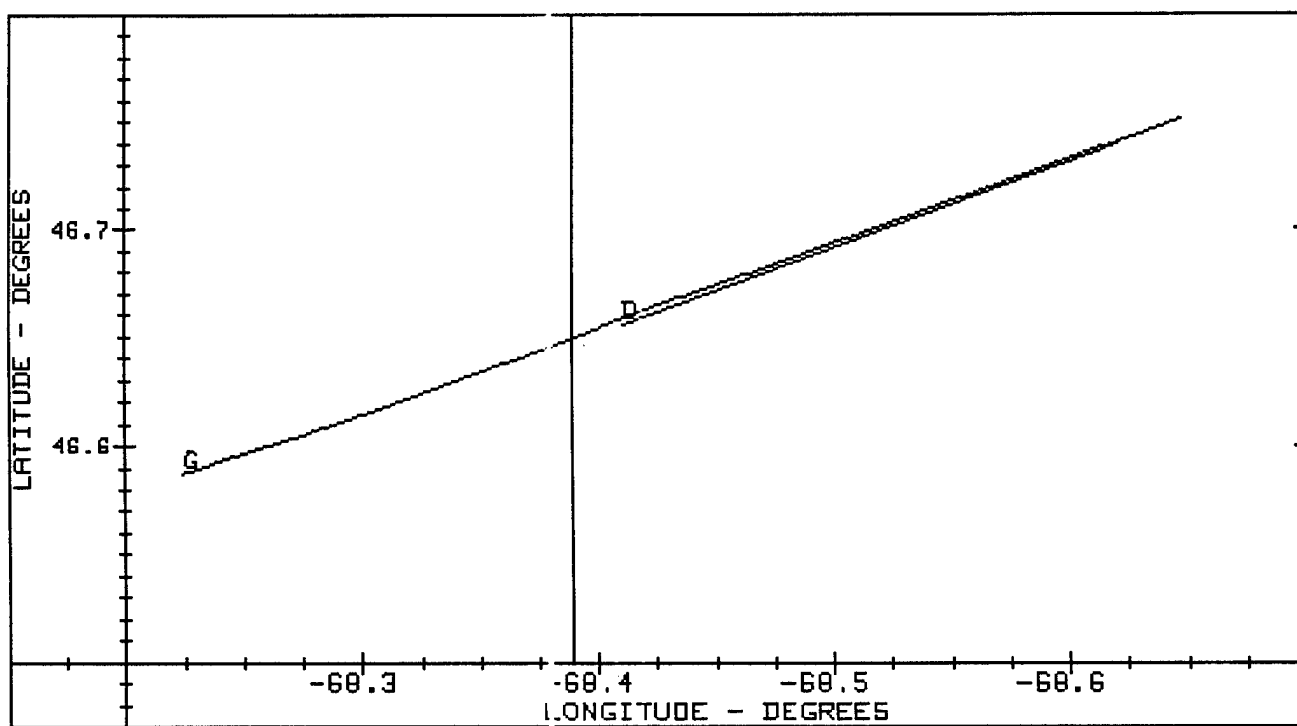
INS AIRCRAFT POSITION

DAY 179 TIME 1:34 PASS 20



GPS AIRCRAFT POSITION

DAY 179 TIME 1:34 PASS 20



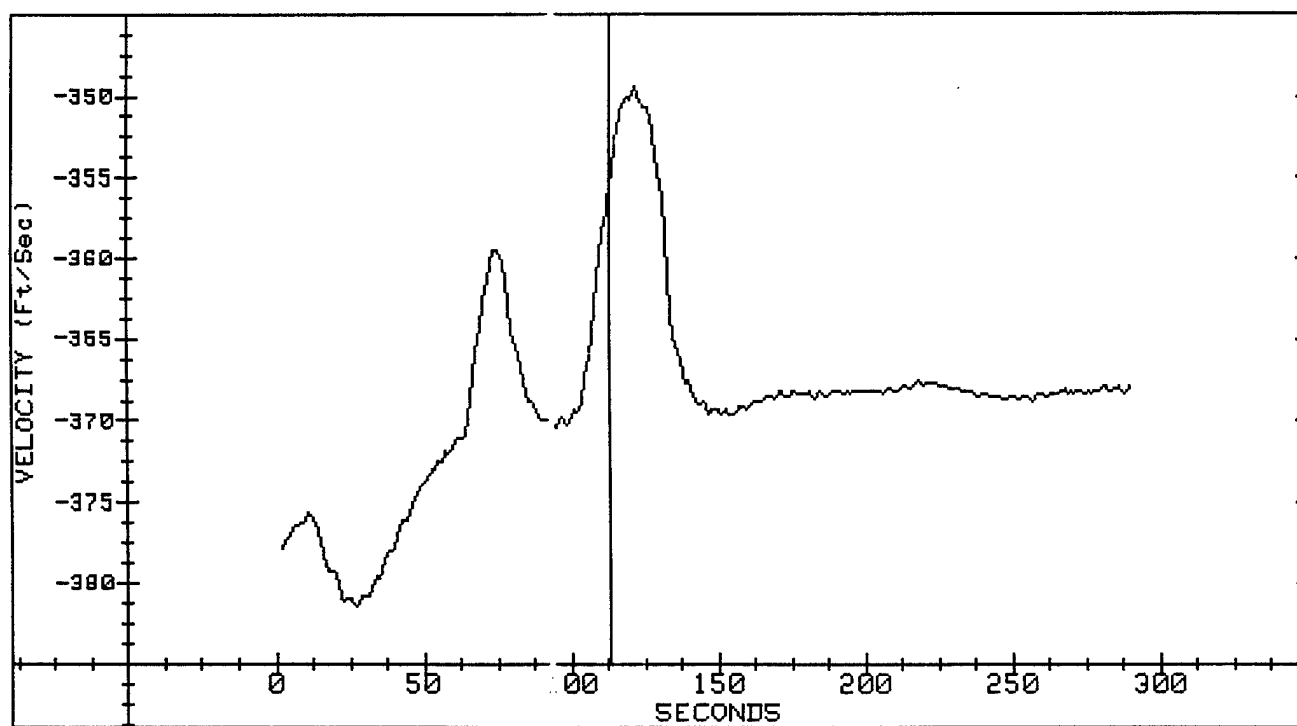
GPS V<sub>e</sub>

DAY 179

TIME 1:34

PASS 20

m= -367.9, sd= 2.12109



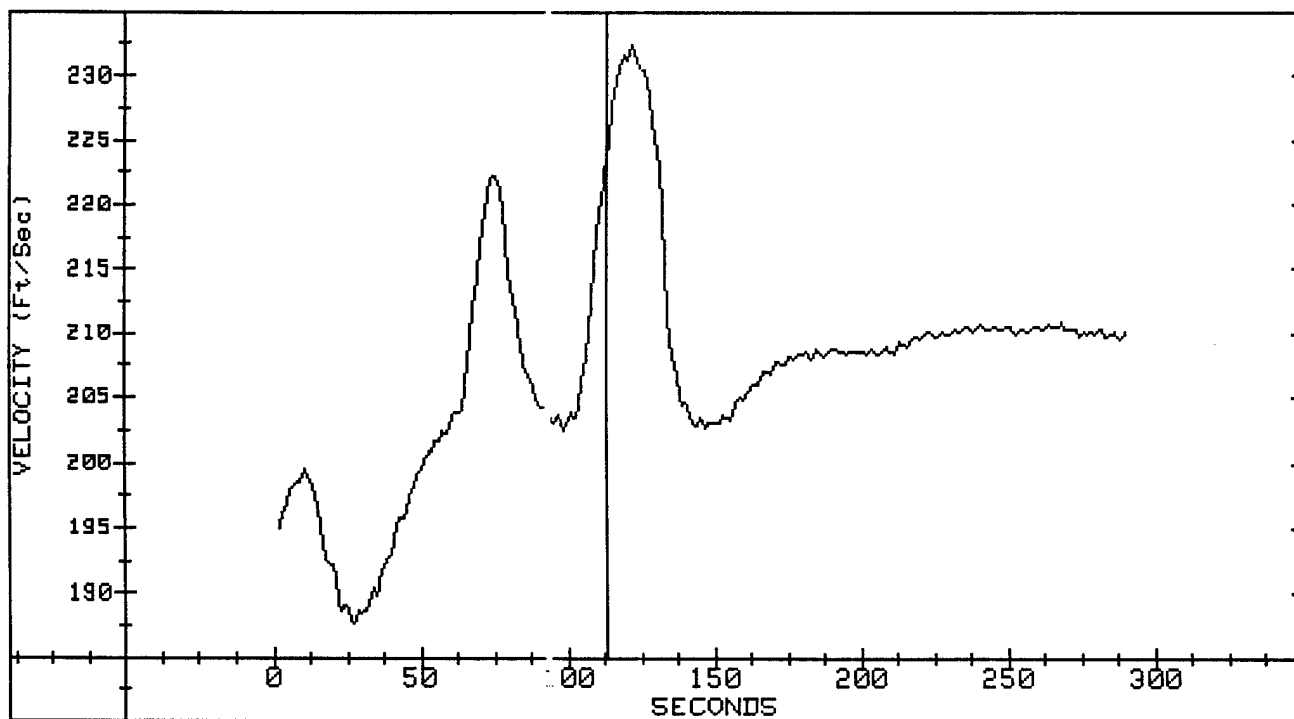
GPS Vn

DRY 179

TIME 1:34

PASS 20

m= 200.9, sd= 3.26752



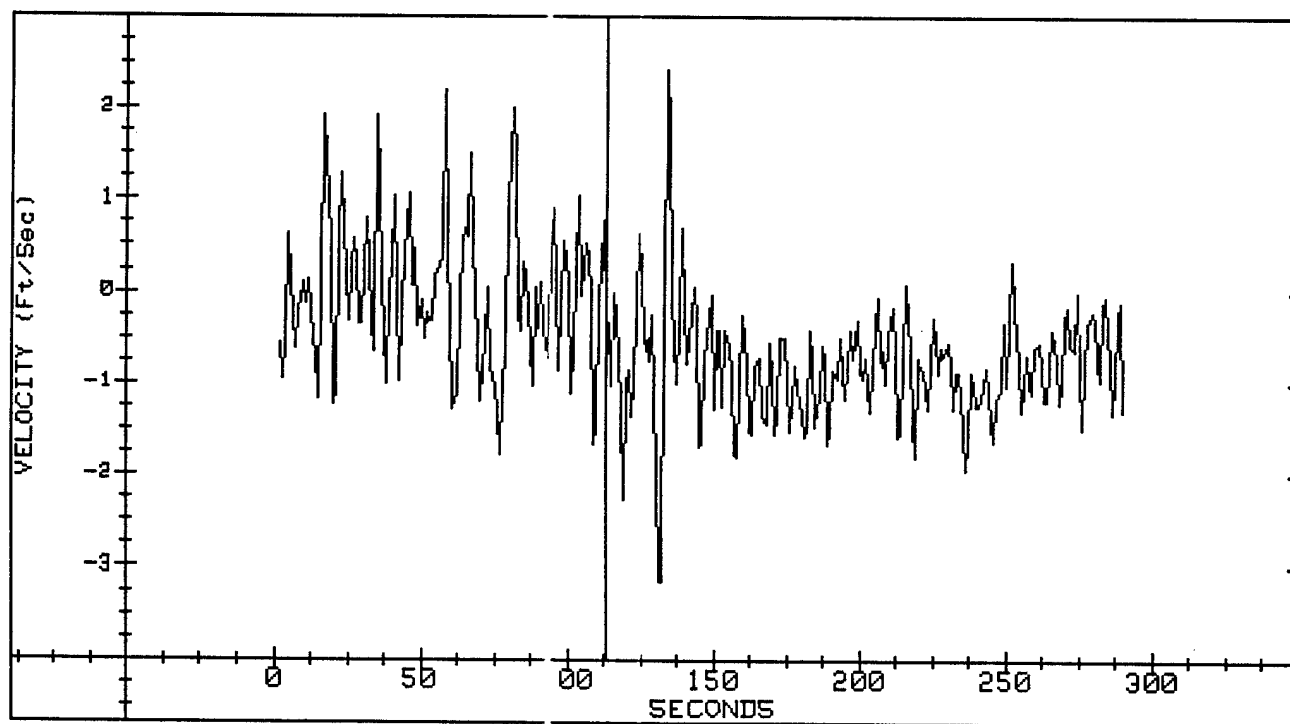
GPS Vv

DAY 179

TIME 1:34

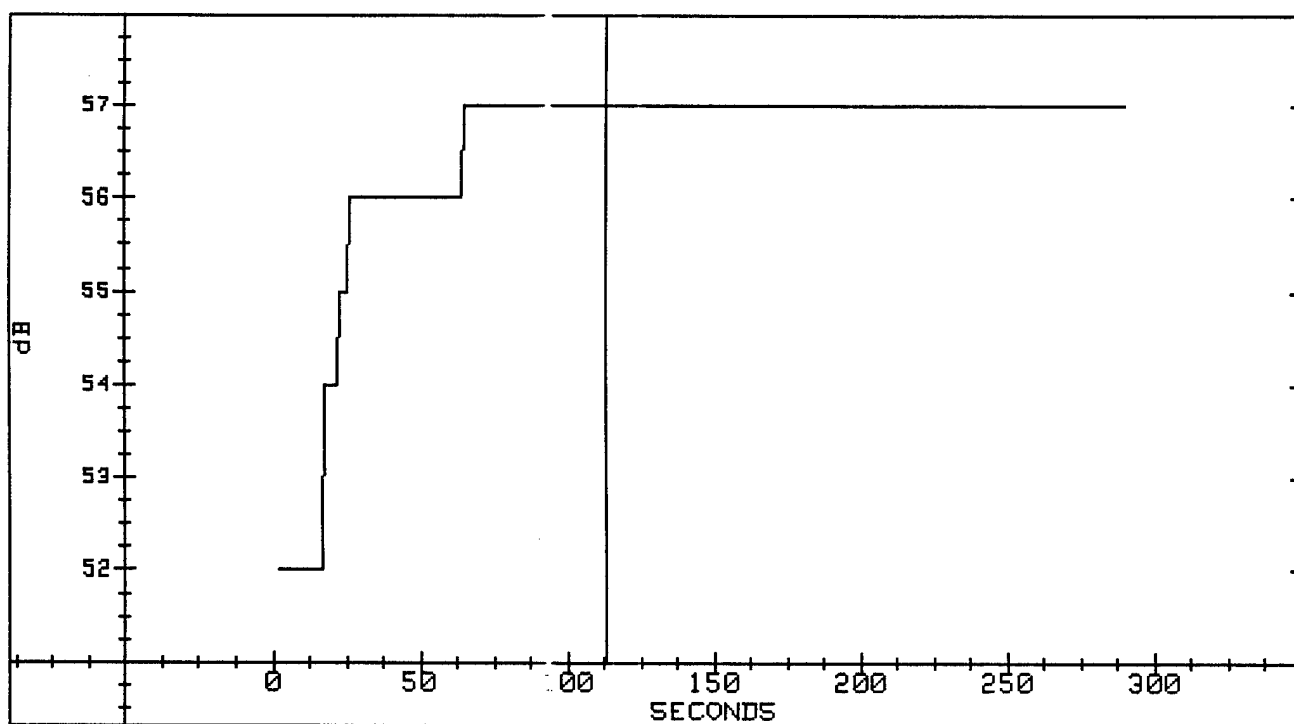
PASS 20

m= -.0410, sd= .637422



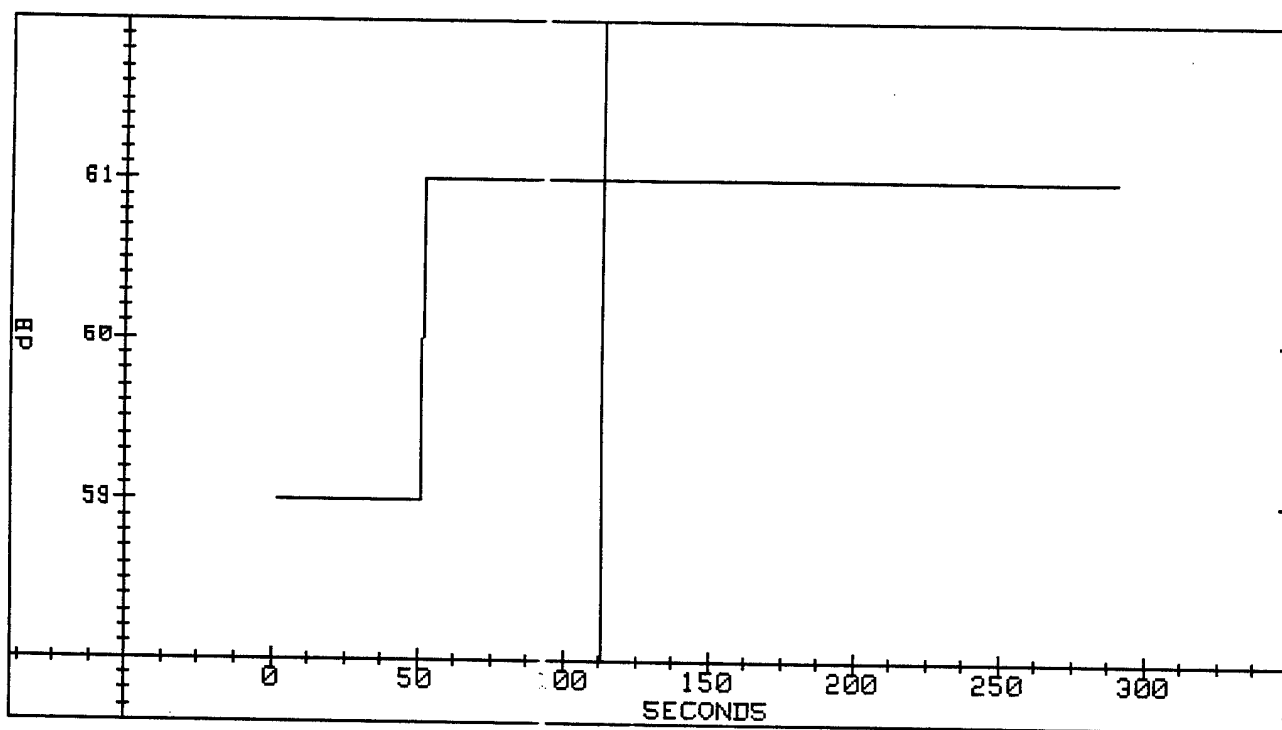
Ch1 RES Attenuation

DAY 179 TIME 1:34 PASS 20 m= 57, sd= 0



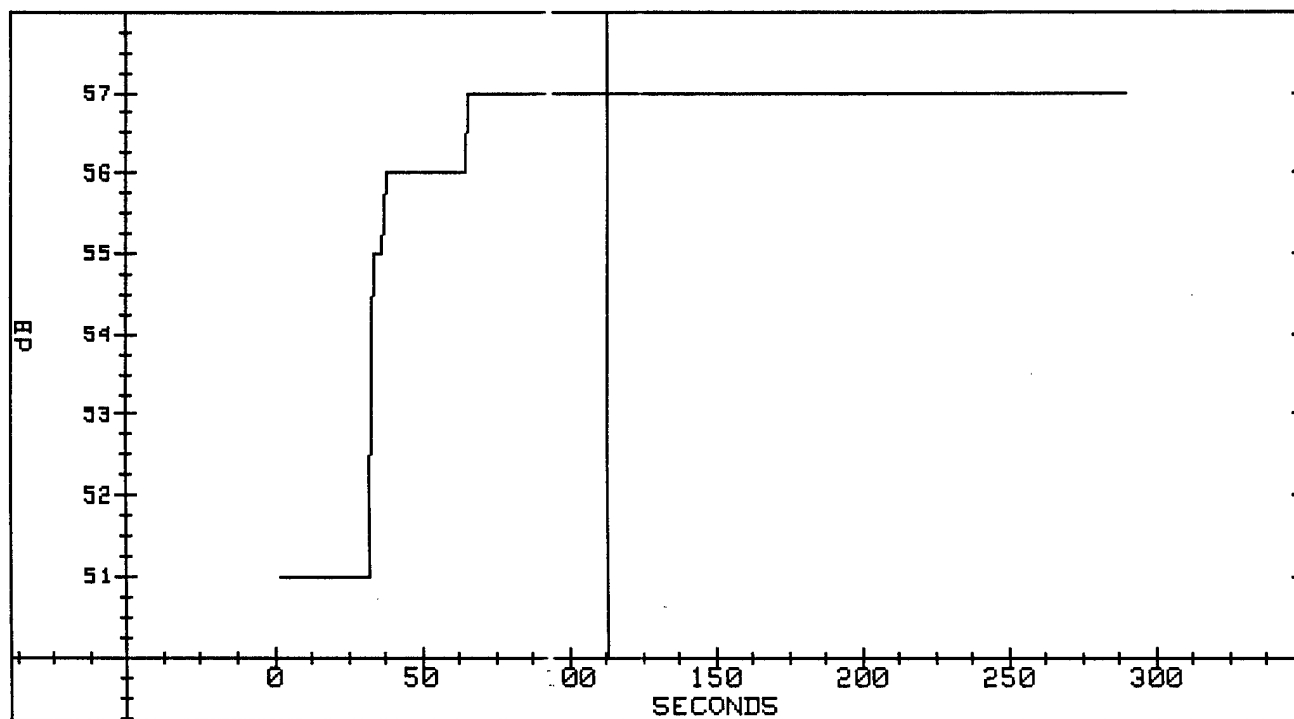
Ch2 RES Attenuation

DAY 179 TIME 1:34 PASS 20 m= 61, sd= 0



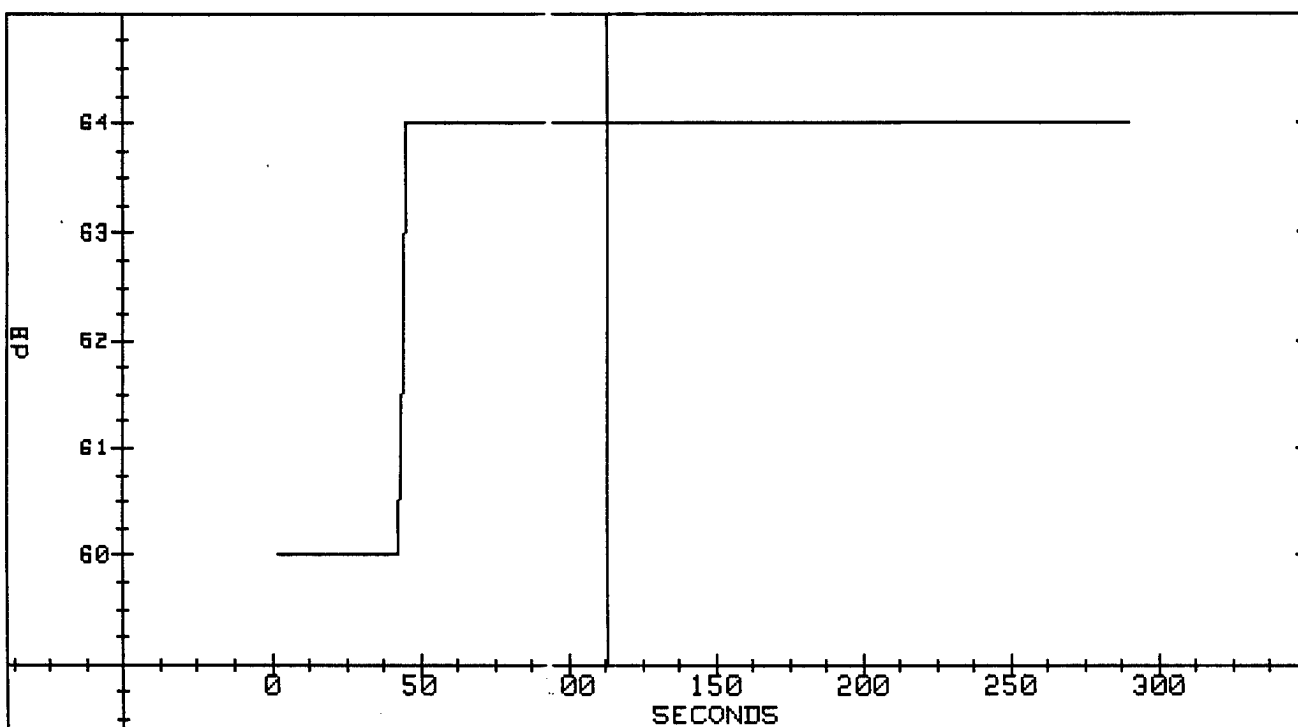
Ch3 RES Attenuation

DAY 179 TIME 1:34 PASS 20 m= 57, sd= 0



Ch4 RES Attenuation

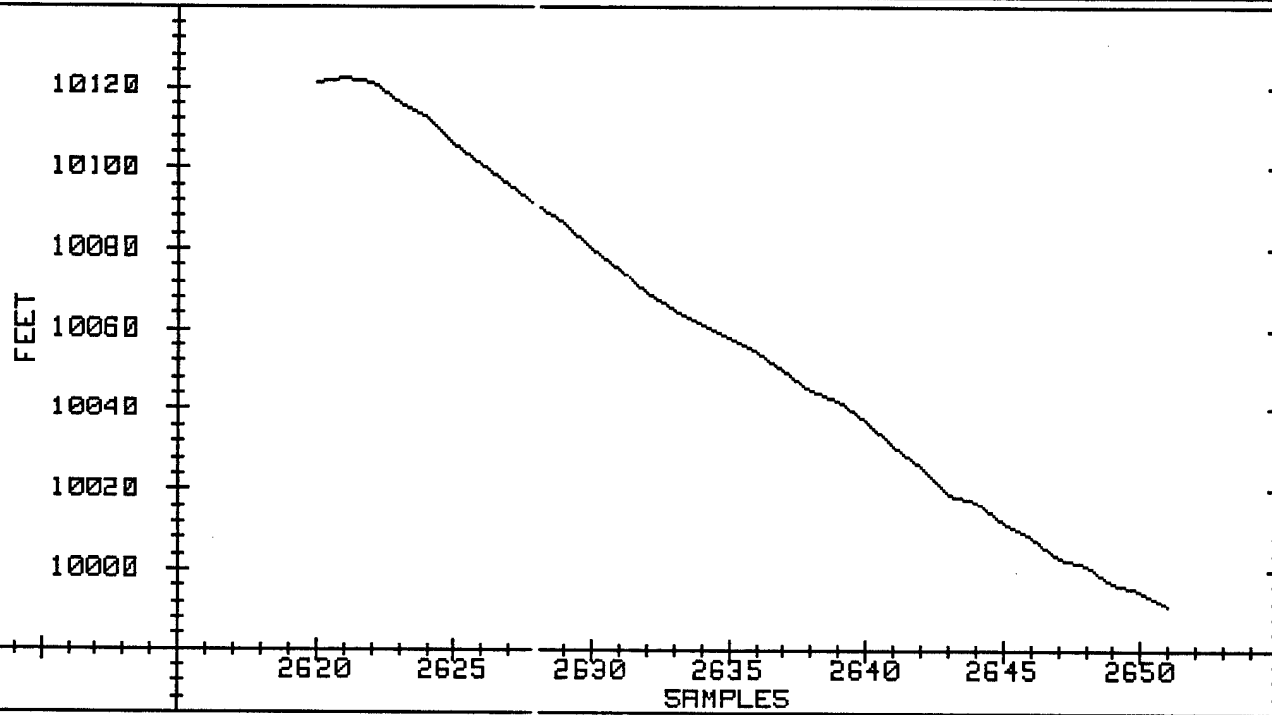
DAY 179 TIME 1:34 PASS 20 m= 64, sd= 0



## GPS ALTITUDE

MEAN- 10056.5 STANDARD DEVIATION- 41.6961

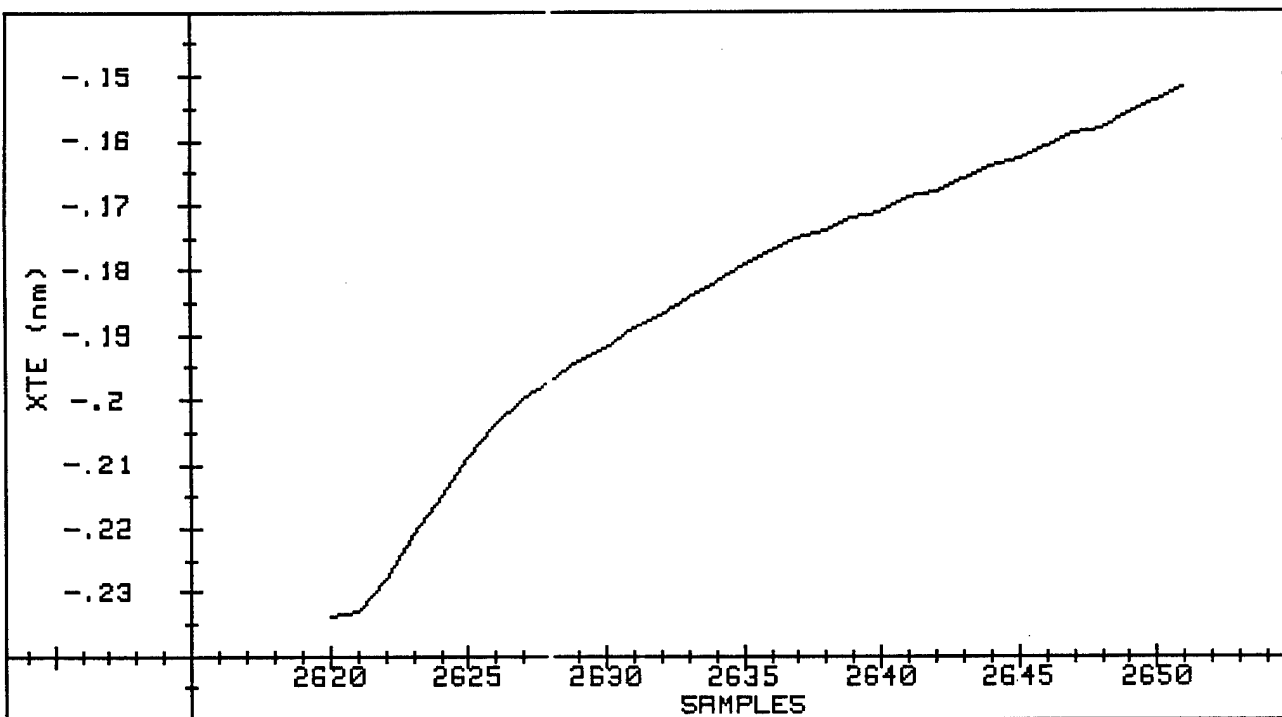
DATE: June 27, 1995 PASS 20

OFF  
ON  
BAR

GPS Cross Track Error

MEAN= -.183968 STANDARD DEVIATION= .0234327

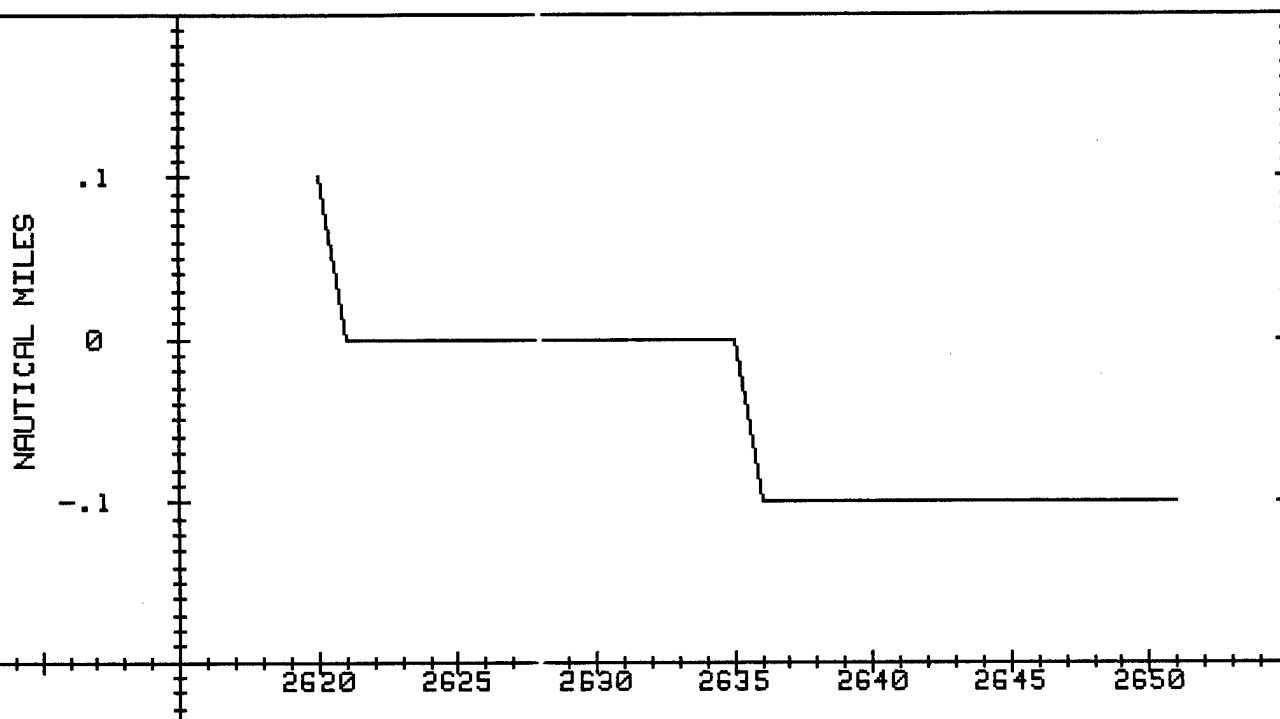
DATE: June 27, 1995 PASS 20



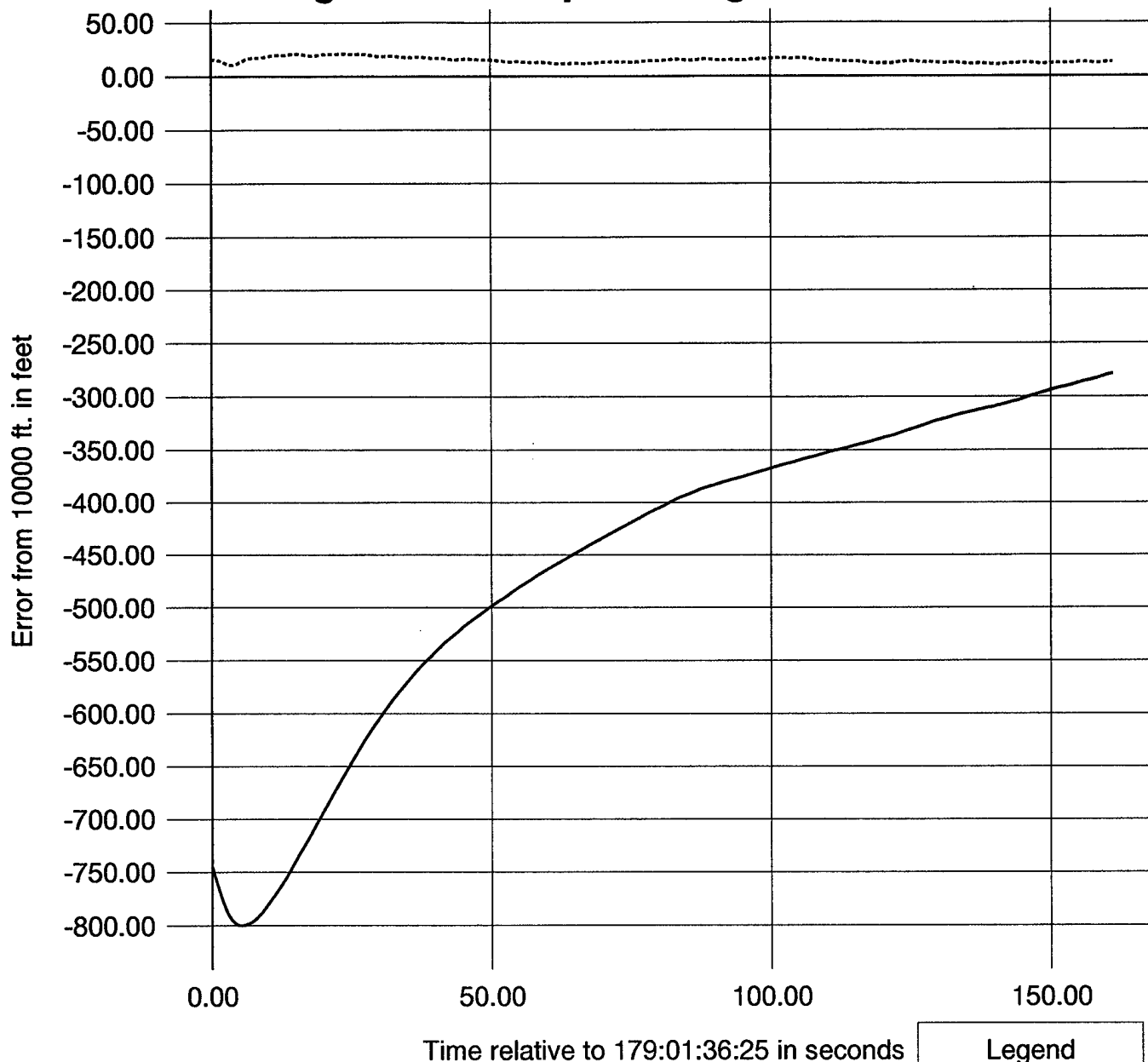
INS CROSS TRACK ERROR

MEAN- -.045875 STANDARD DEVIATION- .0558143

DATE: June 27, 1995 PASS 20



# Portage, ME - June 27, 1995 - Pass 20 - Xtk. and Alt. Errors Higher alt. and port are greater than zero



	Mean	St. Dev.
ALT.	14.73	2.76
XTK.	-456.35	152.10

Legend	
—	P5-xt
.....	P5-alt

28 Jun 1995  
Tape: 1441

Post-line Data Sheet  
Line 33  
Mission: Presque Isle DAY 3

Time: 179:01:49:45  
Pass 21  
Req.# 17

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	10000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	9900 ft s.d =	2 Swath Ctr Ang:	30.0°	30.0°	30.0°	30.0°
Slt. rng:	18460 ft	Tgt Dep Ang:	30.0°	30.0°	30.0°	30.0°
Look:	Right	St rng (ft):	16922	16922	16922	16922
Depr Ang:	25.0°	Near Rng Dep:	35.8°	35.8°	35.8°	35.8°
Des. trk:	60.0°	Far Rng Dep:	17.4°	17.4°	17.4°	17.4°
Start Sq:	90.0°	Atten (dB):	53.0	63.0	53.0	66.0
End Sq:	90.0°	RMS Video (%FS)	23.4	15.0	17.5	14.0

#### WAYPOINTS

Line_up:	N 46:37.87	W 68:52.25	Main Target:	IE
Start:	N 46:43.90	W 68:37.18	Mocomp Point:	
End:	N 46:48.90	W 68:24.59	Lat:	N 46:44.12
			Long:	W 68:28.98
From:	N 36:51.35	W 86:33.02	Tgt Trk:	0.0
To:	N 52:47.34	W 44:22.84	Tgt Vel:	0.0
			Alt:	770.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	->	10 sec
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)	
Swath width:	Single	Ave Gndspd:	Real	-> 247.2 kts
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4	
Position Reference:	ON	GPS Vel/Pos Reference		
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft	
Range Gate Delta:	0.0 ft	Range Tracking is	OFF	
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF	
TX Chirp Filename:	CTLU2B	RX Chirp Filename:	CRL1N0A	
Ave Ref Vel	-> 3.3 fps (s.d.= 7.2)			
Ave Fil Vel	-> 7.5 fps (s.d.= 6.8)			

NML XMIT PWR	ANZ BIAS	Tape Footage	Drive no.
X: -70.0	Elevation: 0.0°	Starting: 1476 ft	(1)
L: -70.0	Azimuth: 0.0°	Ending: 2683 ft	(1)
C: -70.0	Pitch: 0.0°		
P: 40.1			

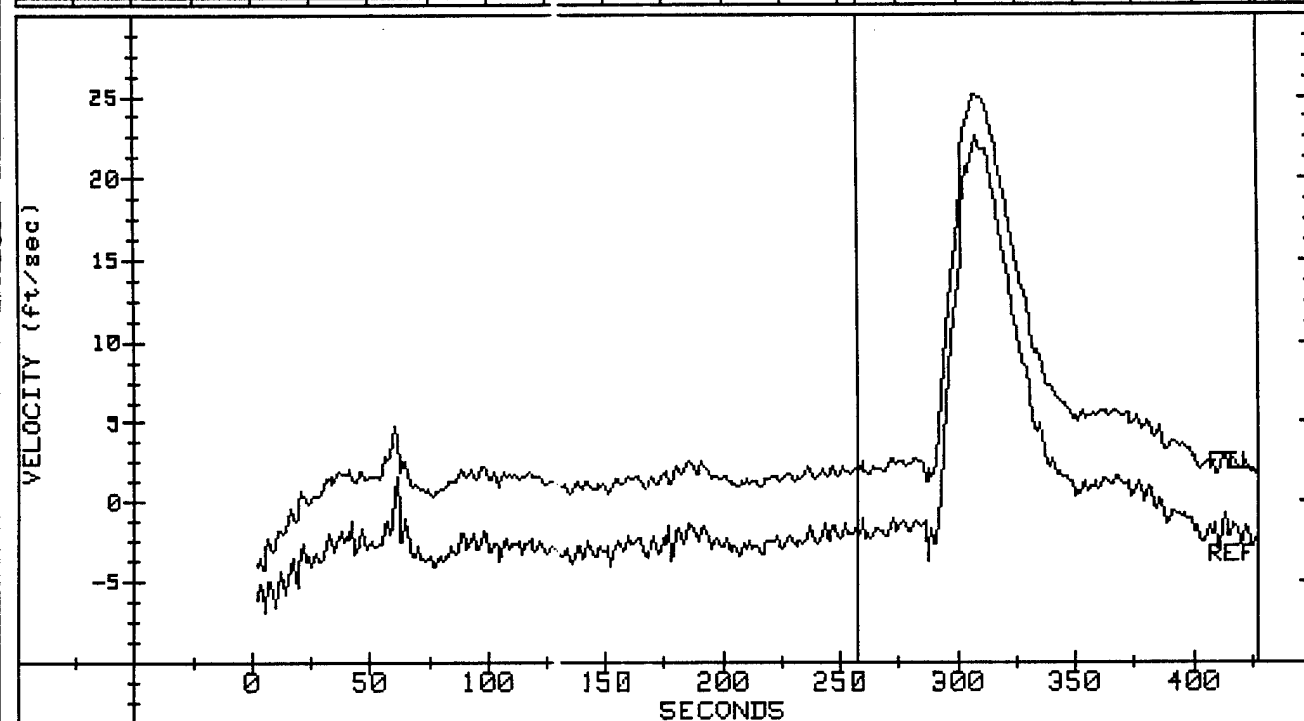
Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 2079.0	X: 63.8 dB	Start: 01:49:45
Y: 1867.0	L: 63.8 dB	End: 01:52:25
Z: 17142.0	C: 63.8 dB	

#### Mocomp Counters

Start:	1252216	00138B78h	CPA (UCT):	00:00:00
End:	1279011	00138423h	Alt:	0 ft (GPS)
			Lat:	N 0:00: 0
			Lon:	E 0:00: 0

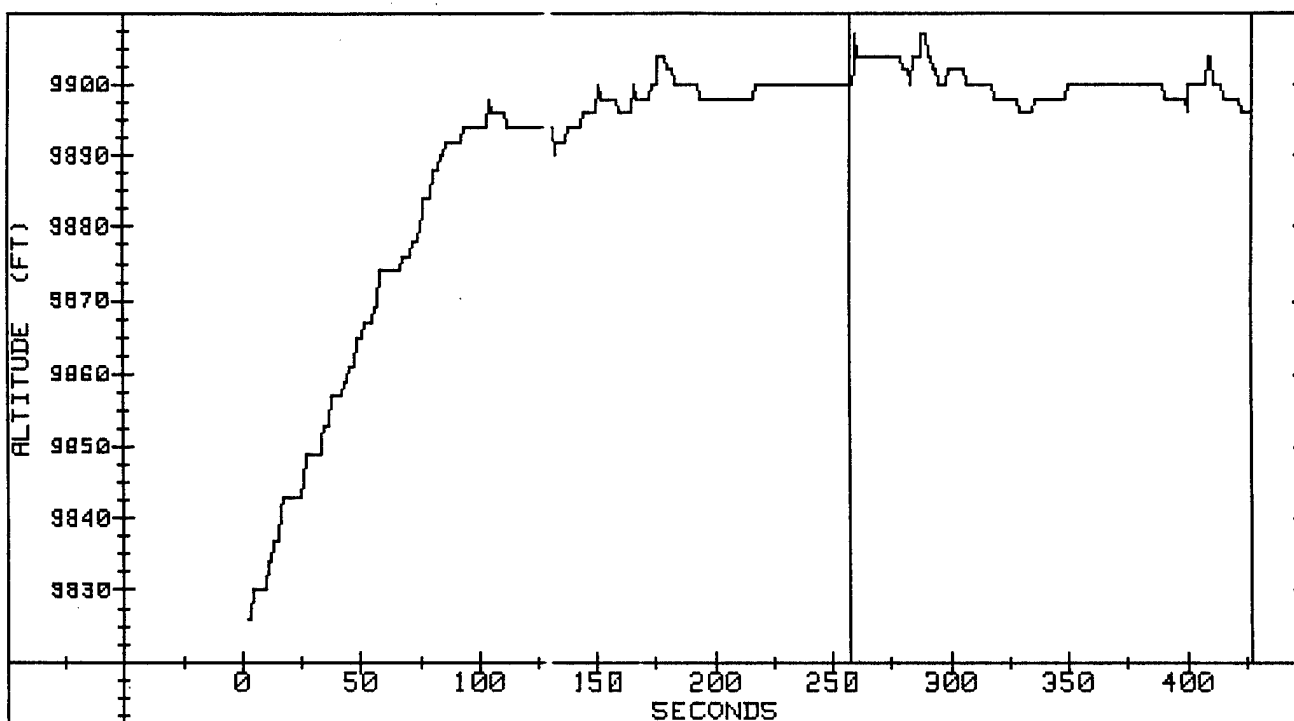
FILTERED vs. REF. VELOCITY  
DAY 179 TIME 1:45 PASS 21

INE  
LORAN  
GPS



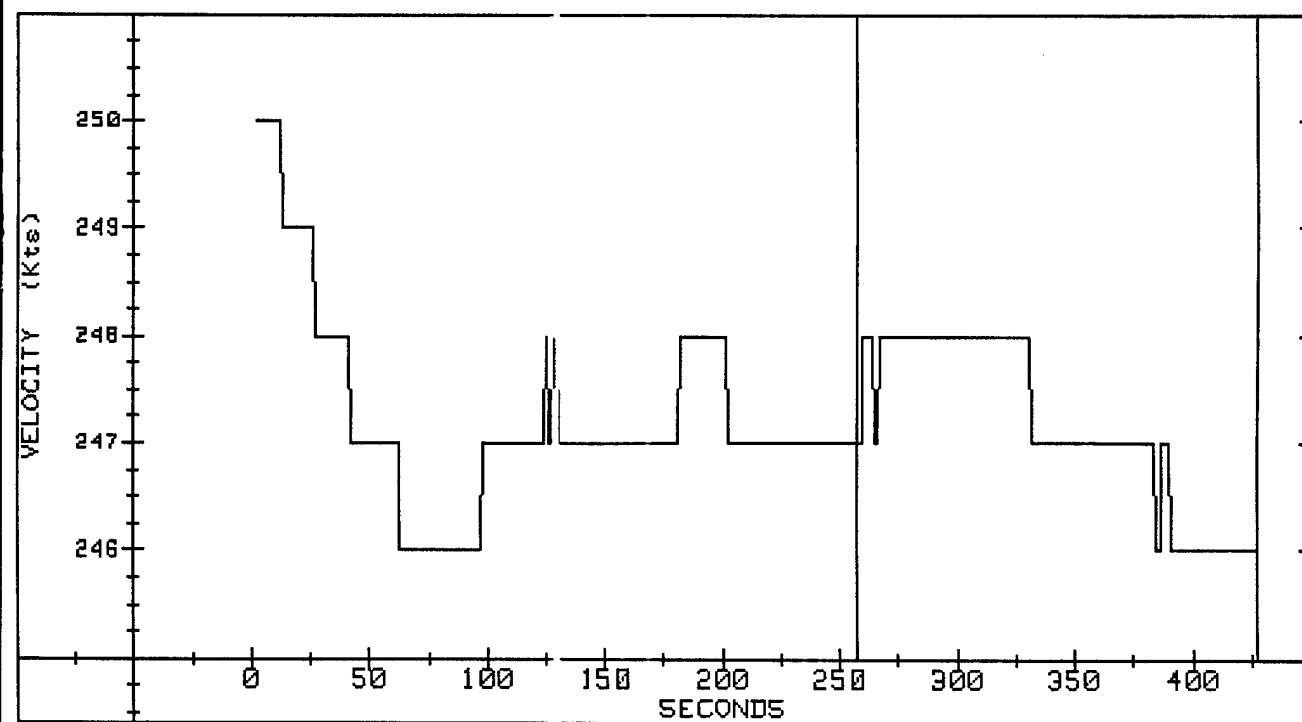
# BARO ALTITUDE

DAY 179 TIME 1:45 PASS 21 m= 9900, sd= 2.36026



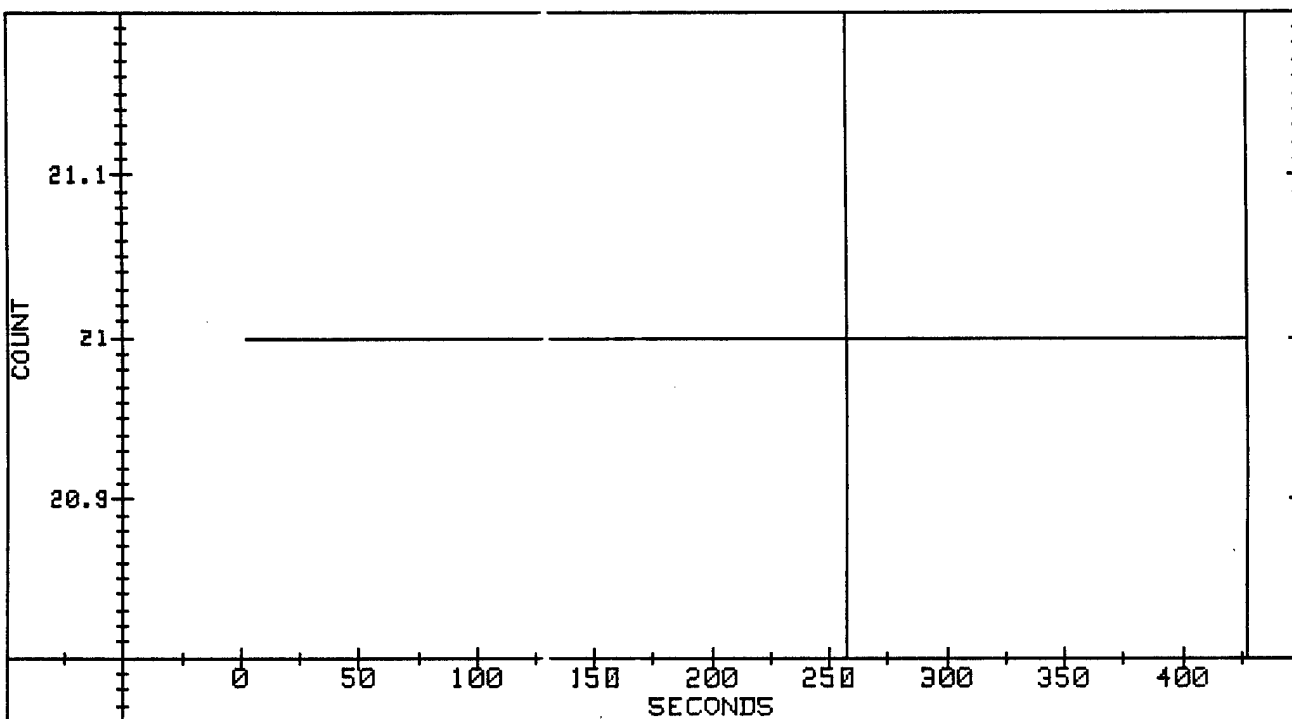
## INS GROUND SPEED

DRY 179 TIME 1:45 PASS 21 m= 247.2, sd= .792504



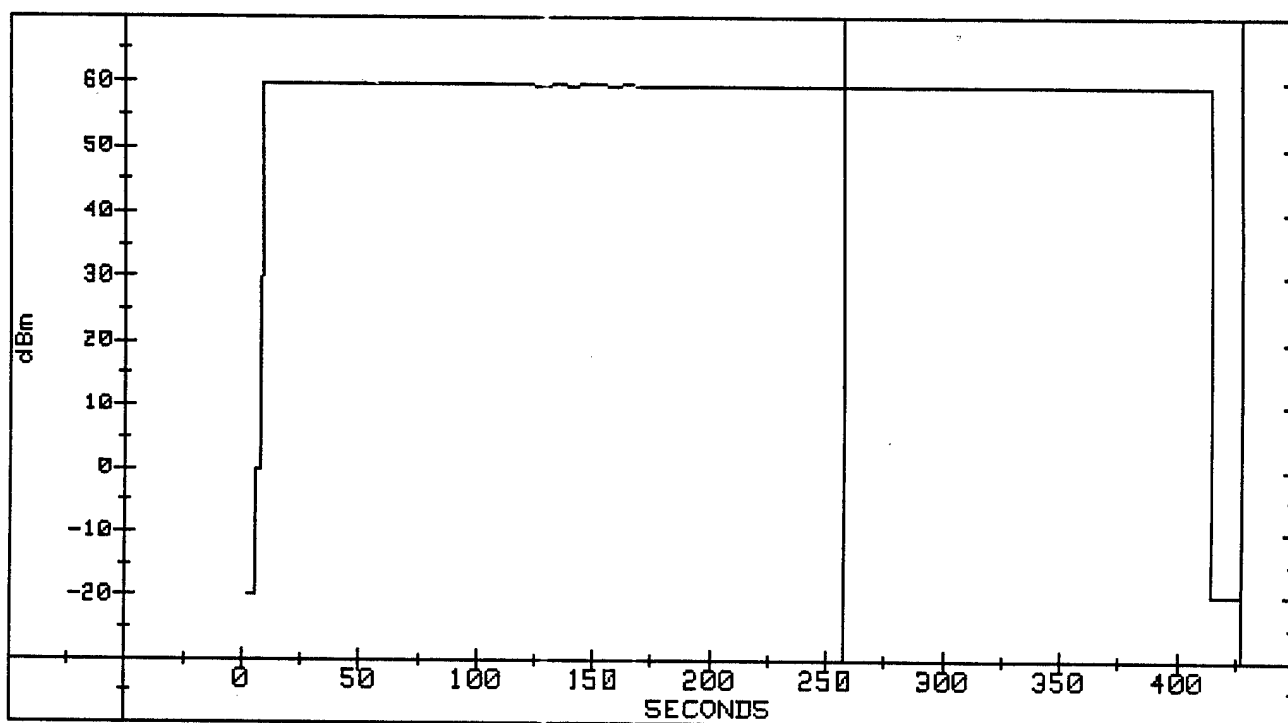
# PASS NUMBER

DAY 179 TIME 1:45 PASS 21 m= 21, sd= 0



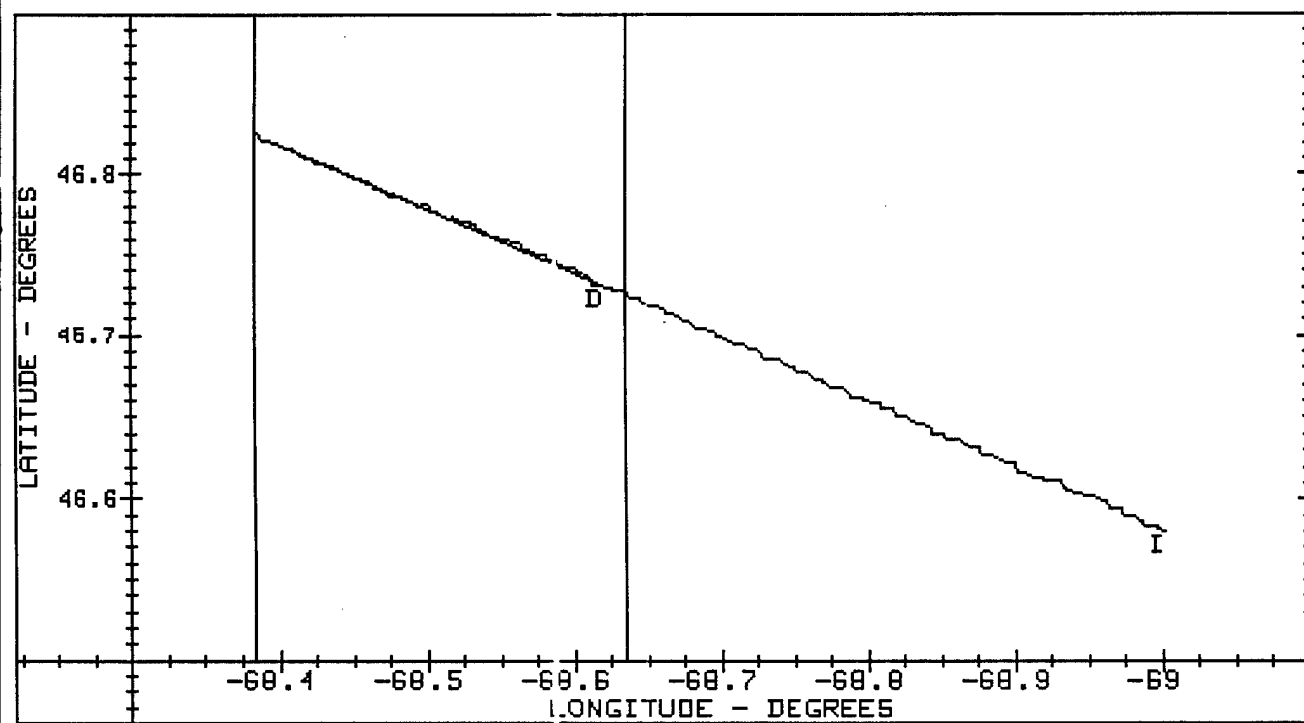
P Band Power

DRY 179 TIME 1:45 PASS 21 m= 52.93, sd= 21.6138



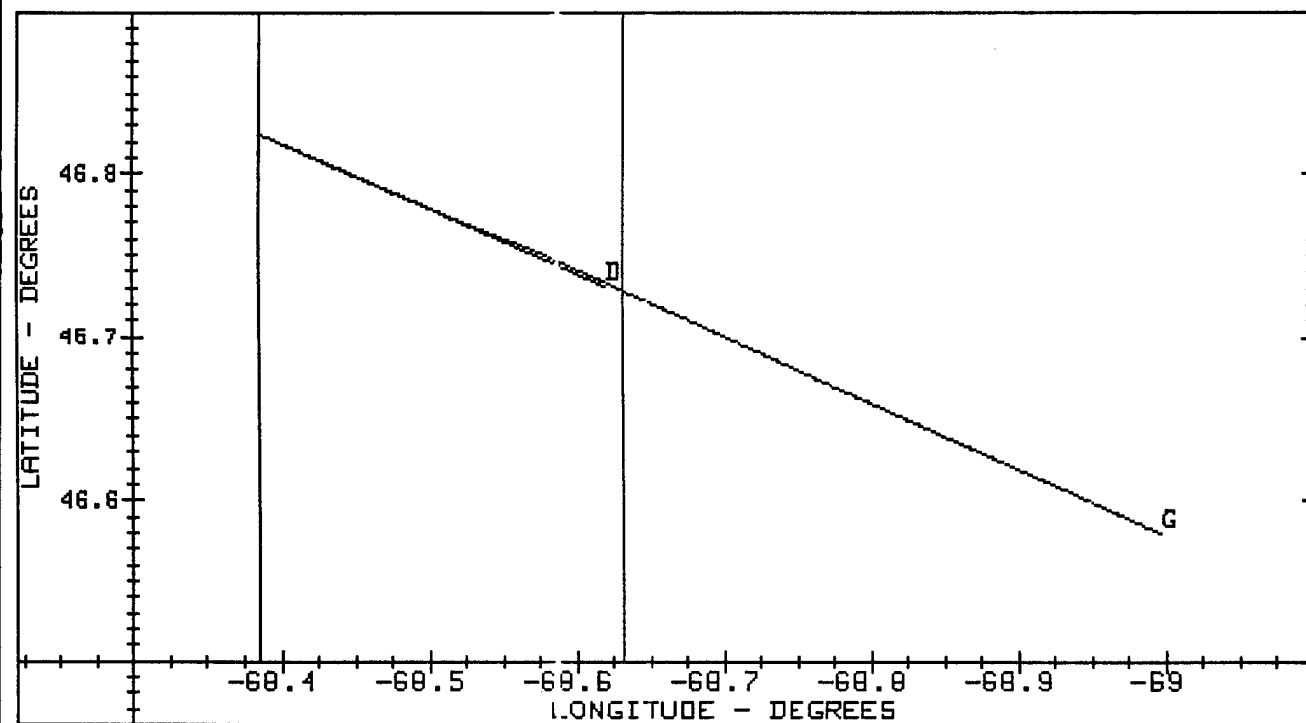
INS AIRCRAFT POSITION

DAY 179 TIME 1:45 PASS 21



GPS AIRCRAFT POSITION

DAY 179 TIME 1:45 PASS 21

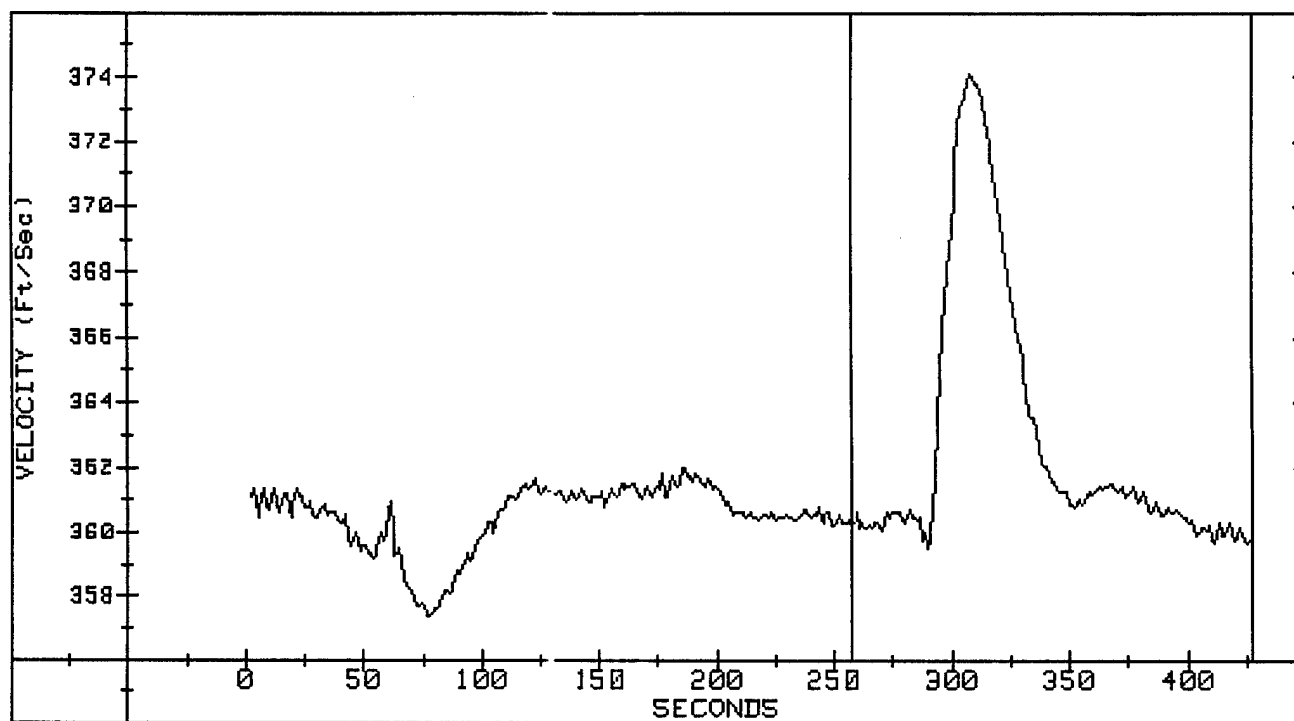


GPS V<sub>e</sub>

DAY 179 TIME 1:45

PASS 21

m= 363, sd= 4.19507



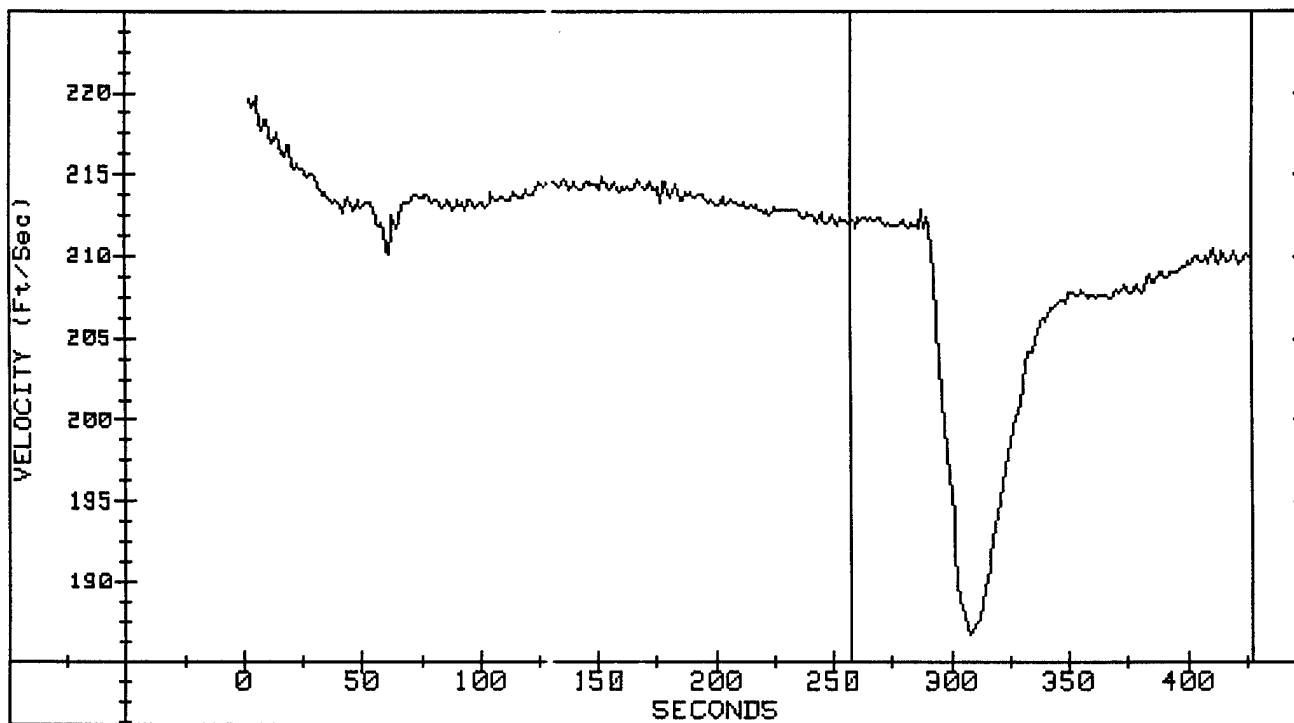
GPS Vn

DAY 179

TIME 1:45

PASS 21

m= 205.6, sd= 7.0105



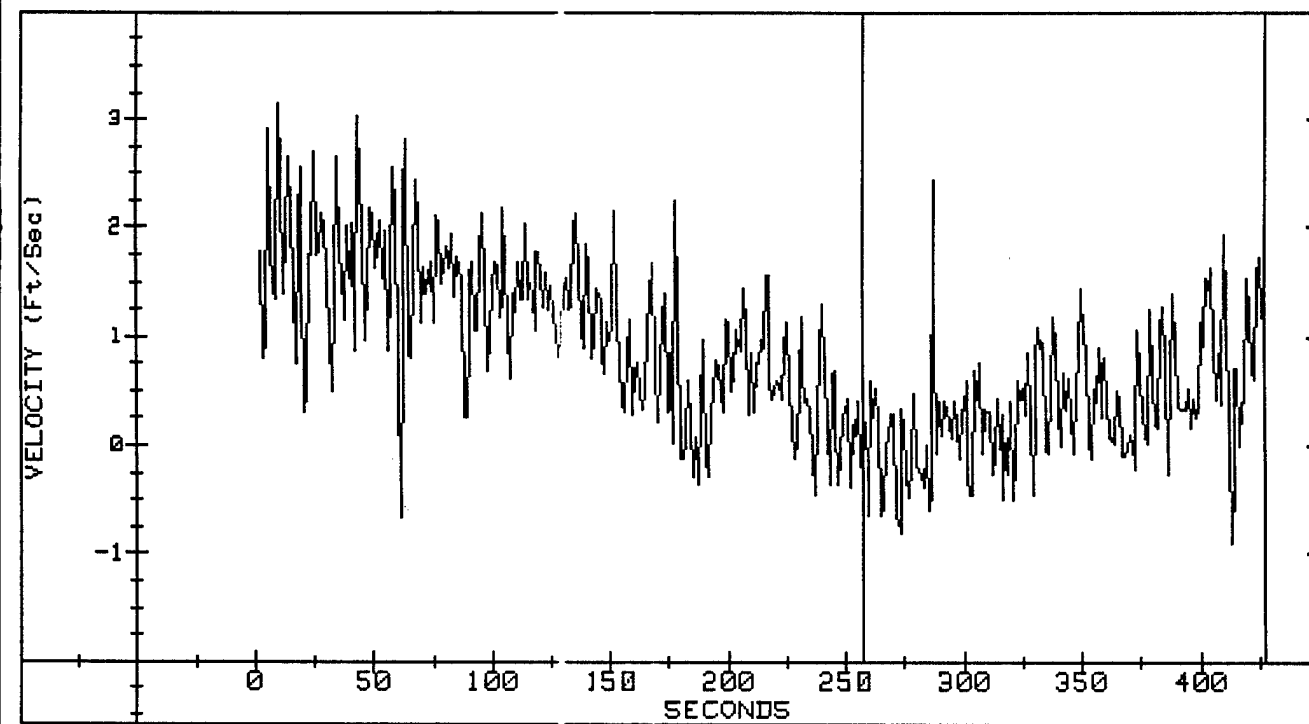
GPS Vv

DAY 179

TIME 1:45

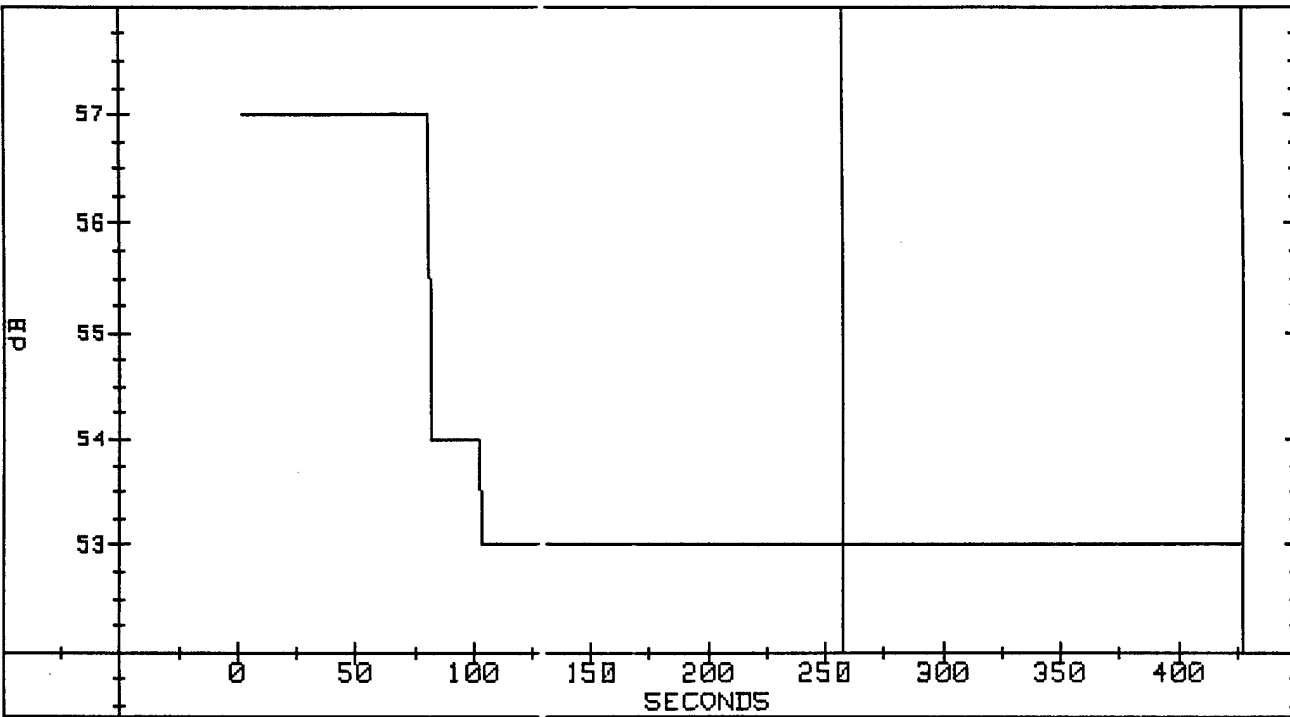
PASS 21

m= .3898, sd= .56653



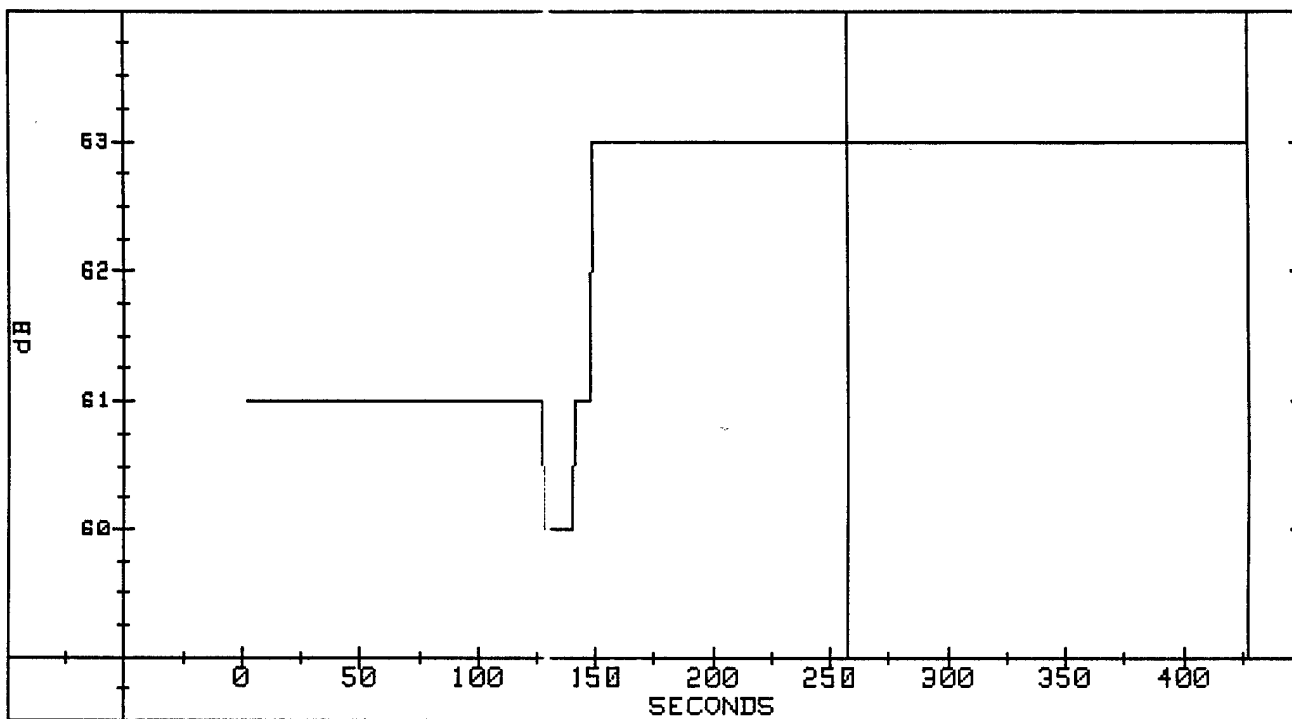
Ch1 RES Attenuation

DAY 179 TIME 1:45 PASS 21 m= 53, sd= 0



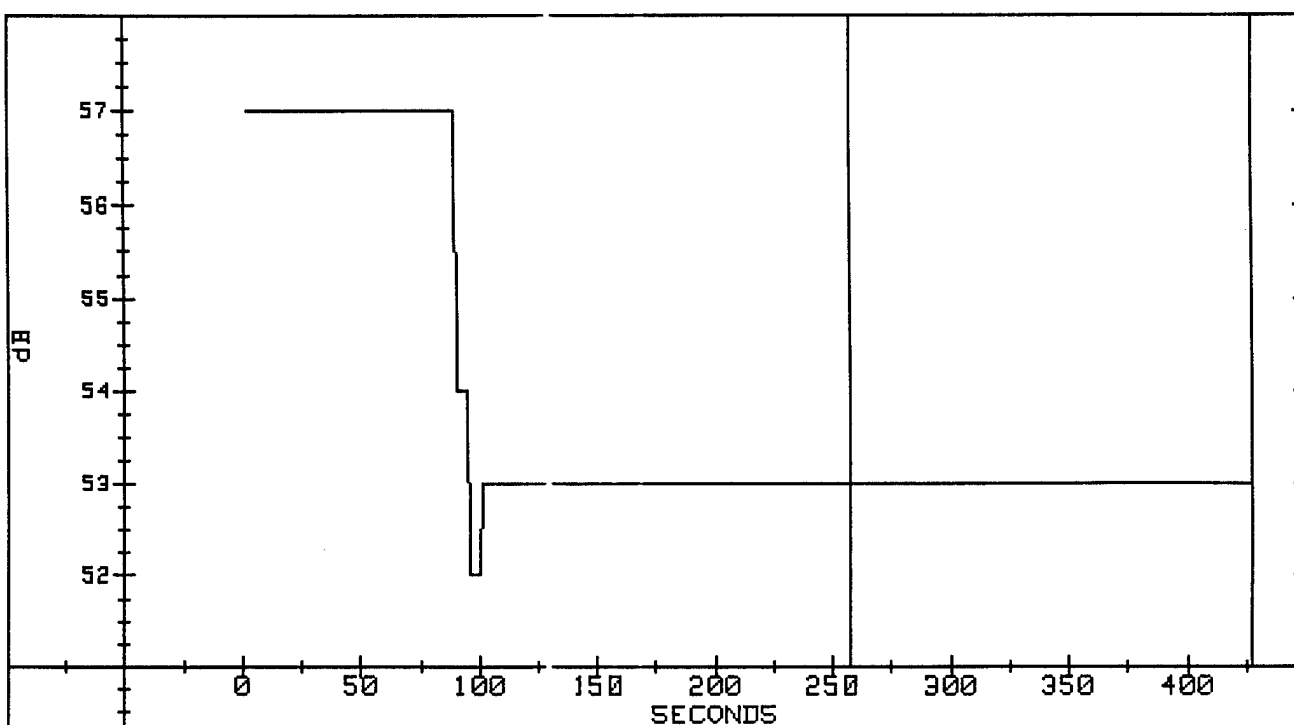
Ch2 RES Attenuation

DAY 179 TIME 1:45 PASS 21 m= 63. sd= 0



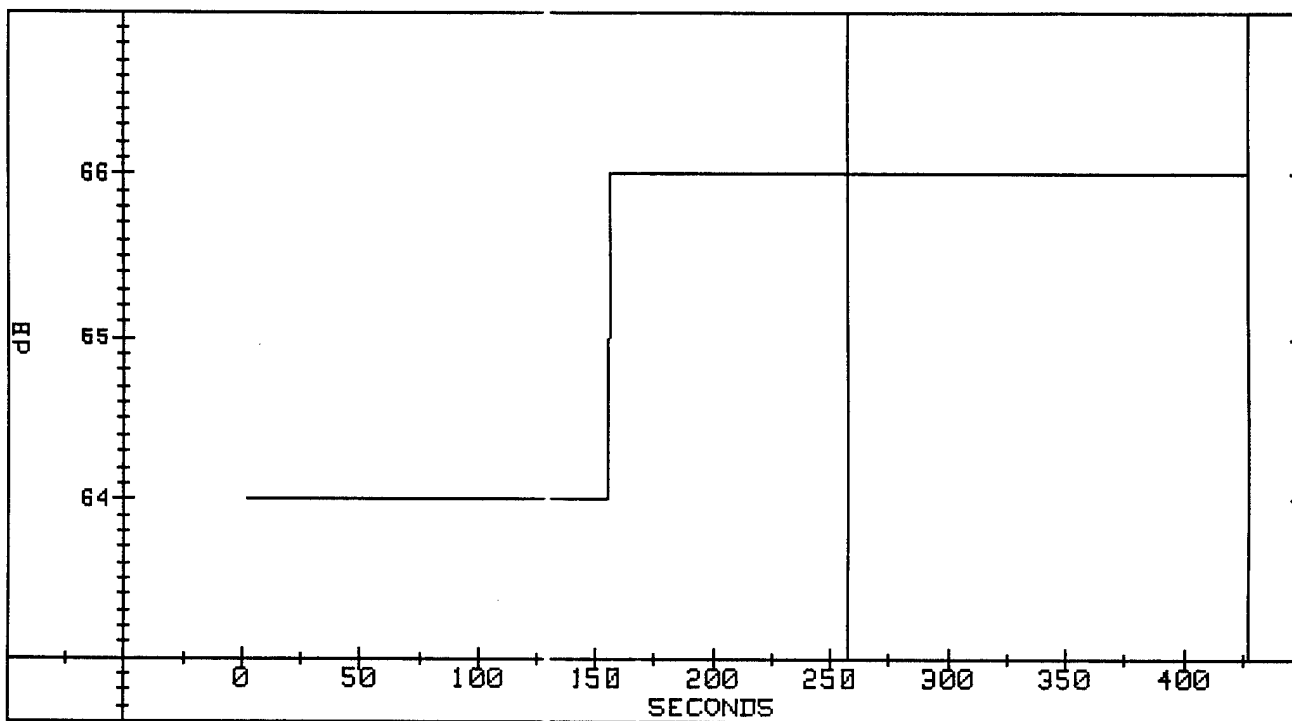
Ch3 RES Attenuation

DAY 179 TIME 1:45 PASS 21 m= 53, sd= 0



Ch4 RES Attenuation

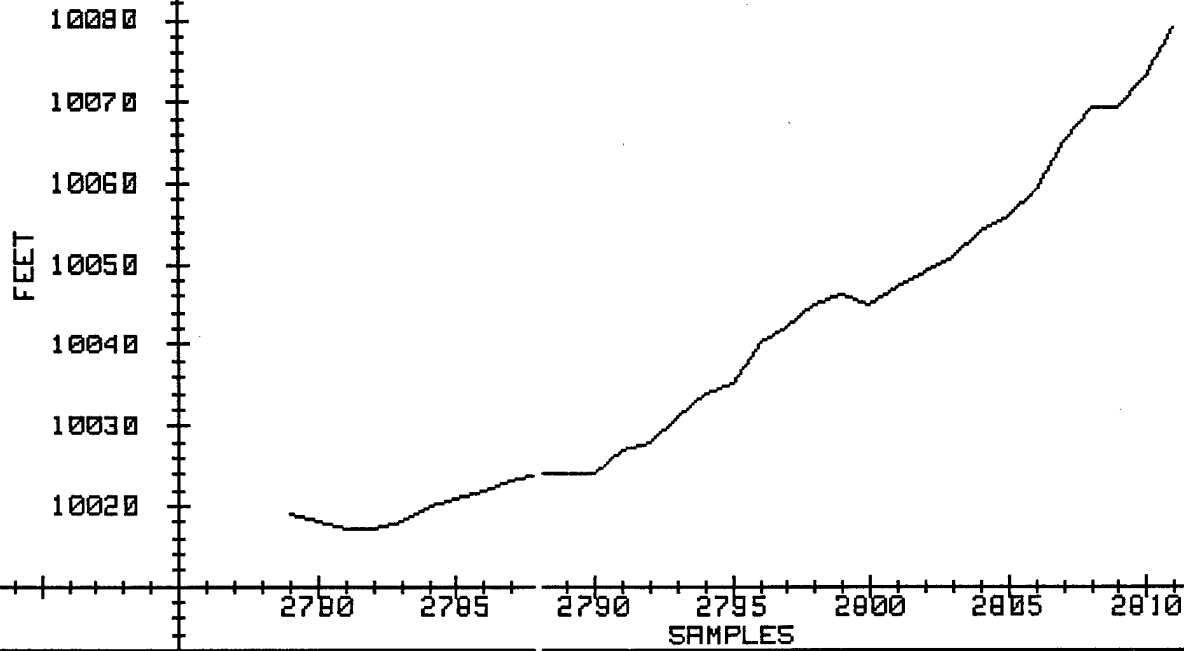
DAY 179 TIME 1:45 PASS 21 m= 66. sd= 0



## GPS ALTITUDE

MEAN= 10039.1 STANDARD DEVIATION= 18.3481

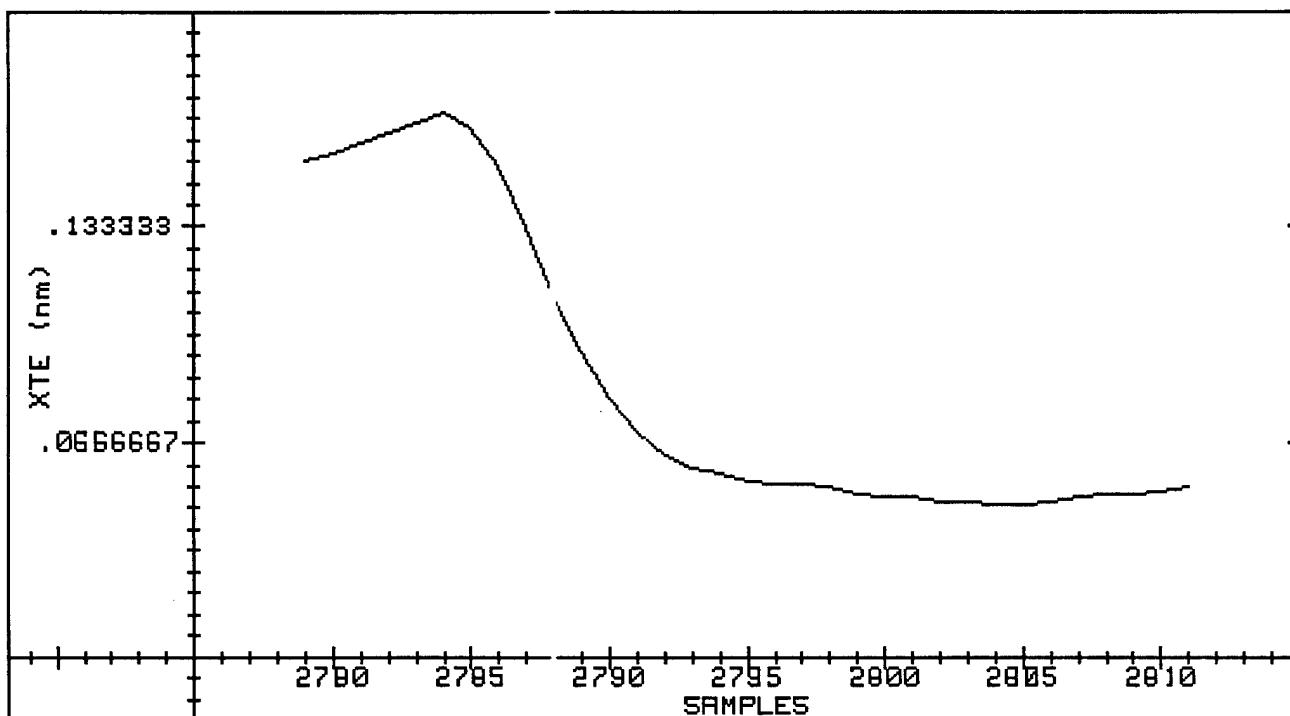
DATE: June 27, 1995 PASS 21

OFF  
ON  
BRR

GPS Cross Track Error

MEAN= .0852727      STANDARD DEVIATION= .0460969

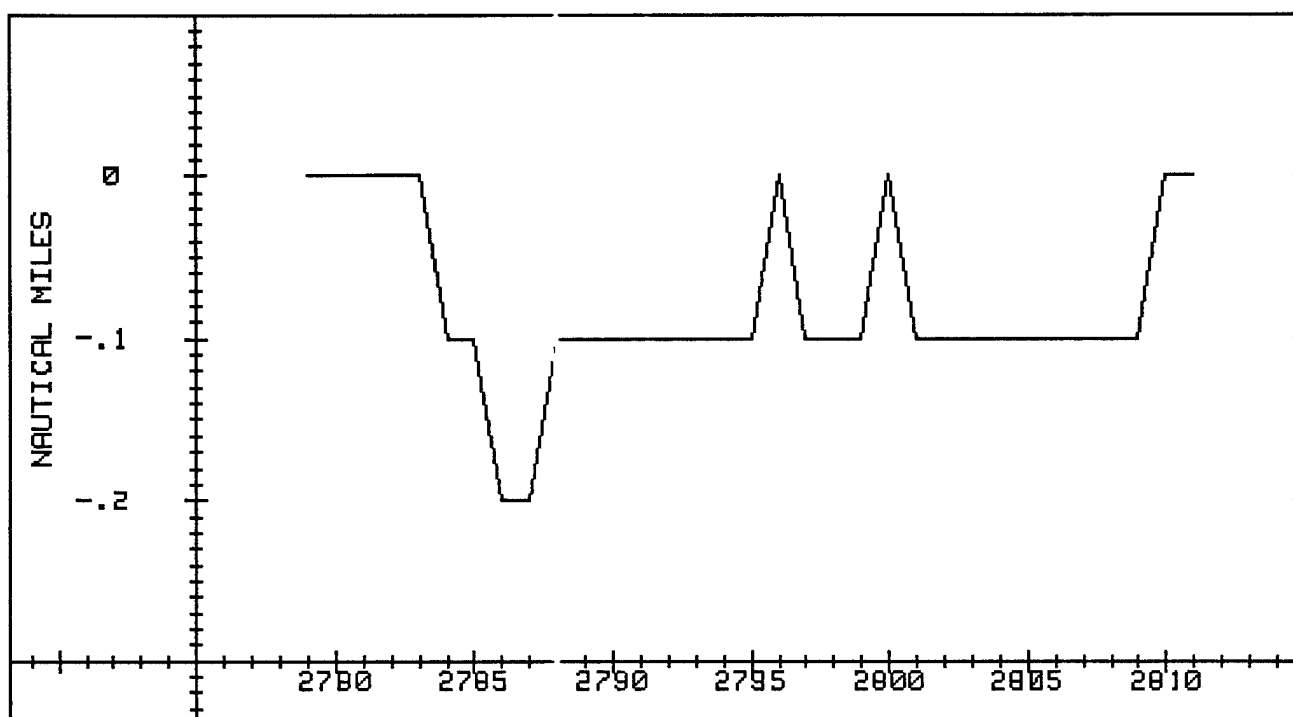
DATE: June 27, 1995      PASS 21



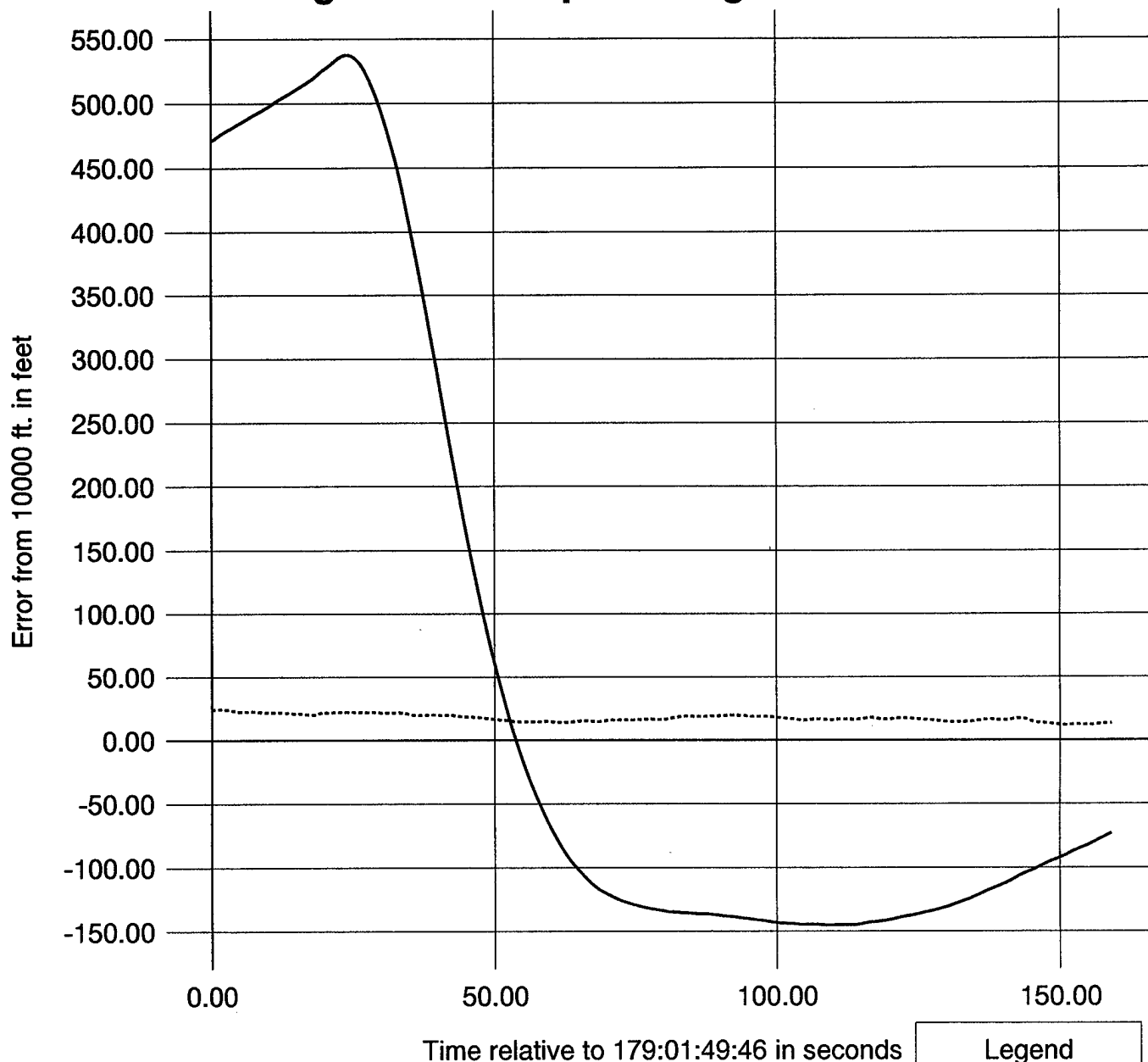
INS CROSS TRACK ERROR

MEAN= -.0767679 STANDARD DEVIATION= .0536971

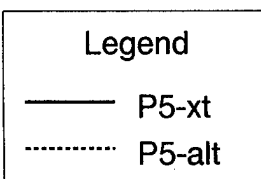
DATE: June 27, 1995 PASS 21



# Portage, ME - June 27, 1995 - Pass 21 - Xtk. and Alt. Errors Higher alt. and port are greater than zero



	Mean	St. Dev.
ALT.	17.63	3.02
XTK.	53.90	261.51



28 Jun 1995  
Tape: 1441

Post-line Data Sheet  
Line 35  
Mission: Presque Isle DAY 3

Time: 179:02:01:48  
Pass 22  
Req.# 18

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	10000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	9889 ft s.d. =	2 Swath Ctr Ang:	30.0°	30.0°	30.0°	30.0°
Slt. rng:	18460 ft	Tgt Dep Ang:	30.0°	30.0°	30.0°	30.0°
Look:	Right	St rng (ft):	16922	16922	16922	16922
Depr Ang:	25.0°	Near Rng Dep:	35.8°	35.8°	35.8°	35.8°
Des. trk:	240.0°	Far Rng Dep:	17.4°	17.4°	17.4°	17.4°
Start Sq:	90.0°	Atten (dB):	51.0	61.0	49.0	66.0
End Sq:	90.0°	RMS Video (%FS)	27.9	15.9	26.1	15.7

#### WAYPOINTS

	Latitude	Longitude
Line_up:	N 46:50.30	W 68:05.61
Start:	N 46:44.33	W 68:20.76
End:	N 46:39.33	W 68:33.35
From:	N 52:42.59	W 44:21.25
To:	N 36:47.44	W 86:28.63

Main Target: IE  
Mocomp Point:  
Lat: N 46:44.12  
Long: W 68:28.98  
Tgt Trk: 0.0 Tgt Vel: 0.0  
Alt: 770.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel: 1  
Resolution: N/A  
Swath width: Single  
RMS Time Constant: 2^7  
Position Reference: ON  
Atten. Tracking: OFF  
Range Gate Delta: 0.0 ft  
Azimuth Presum Rate: Presum6  
TX Chirp Filename: CTLAU2B

Filter damping is Hi -> 10 sec  
PRF Factor is FAST (262.5 kts)  
Ave Gndspd: Real -> 255.1 kts  
Mocomp Off for Chnl 1, 2, 3, 4  
GPS Vel/Pos Reference  
Adj Gnd Scene: 5000.0 ft  
Range Tracking is OFF  
Clutterlock Reference: OFF  
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -2.6 fps (s.d.= 11.2)  
Ave Fil Vel -> .8 fps (s.d.= 10.7)

NML XMIT PWR	ANG BIAS
X: -70.0	Elevation: 0.0°
L: -70.0	Azimuth: 0.0°
C: -70.0	Pitch: 0.0°
P: 39.4	

Tape Footage	Drive no.
Starting: 2697 ft	(1)
Ending: 3902 ft	(1)

Vel Bias	CAL Atten
X: 2079.0	X: 63.8 dB
Y: 1867.0	L: 63.8 dB
Z: 17142.0	C: 63.8 dB

LINE Map Time (UCT)  
Start: 02:01:48  
End: 02:04:22

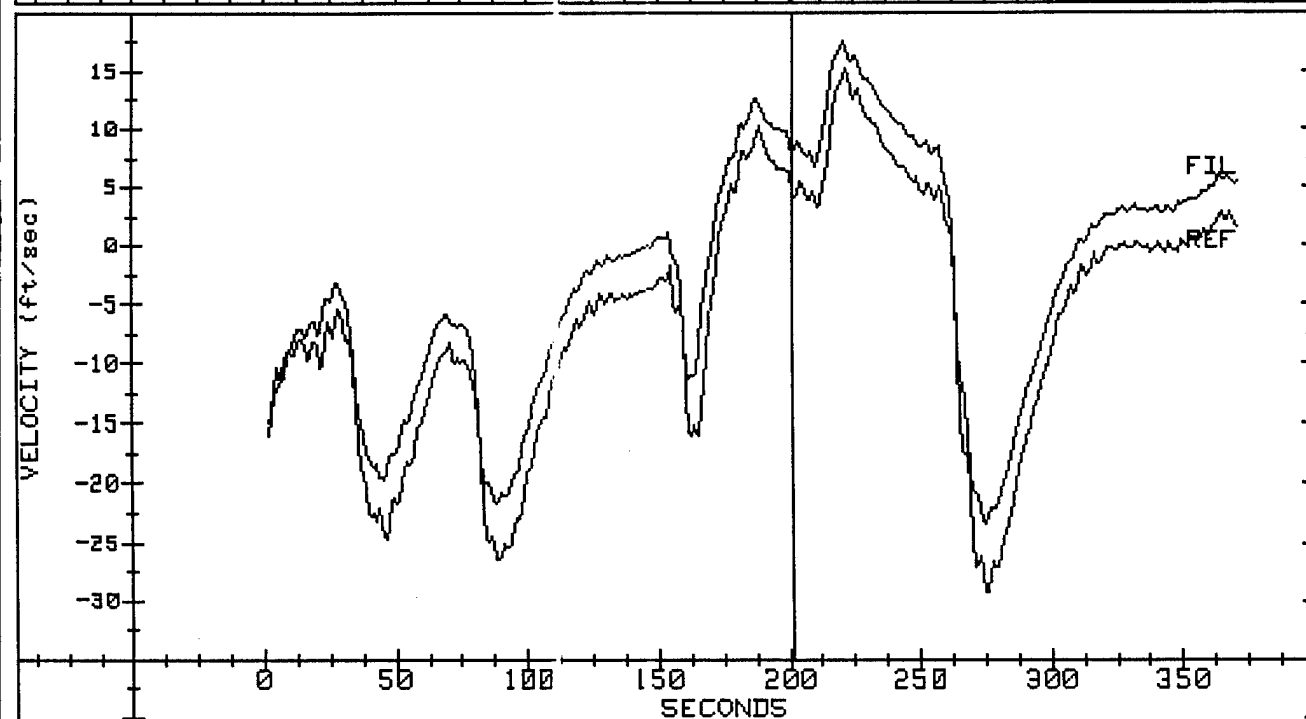
#### Mocomp Counters

Start: 1315361 00141221h  
End: 1341200 00141710h

CPA (UCT): 00:00:00  
Alt: 0 ft (GPS)  
Lat: N 0:00:0  
Lon: E 0:00:0

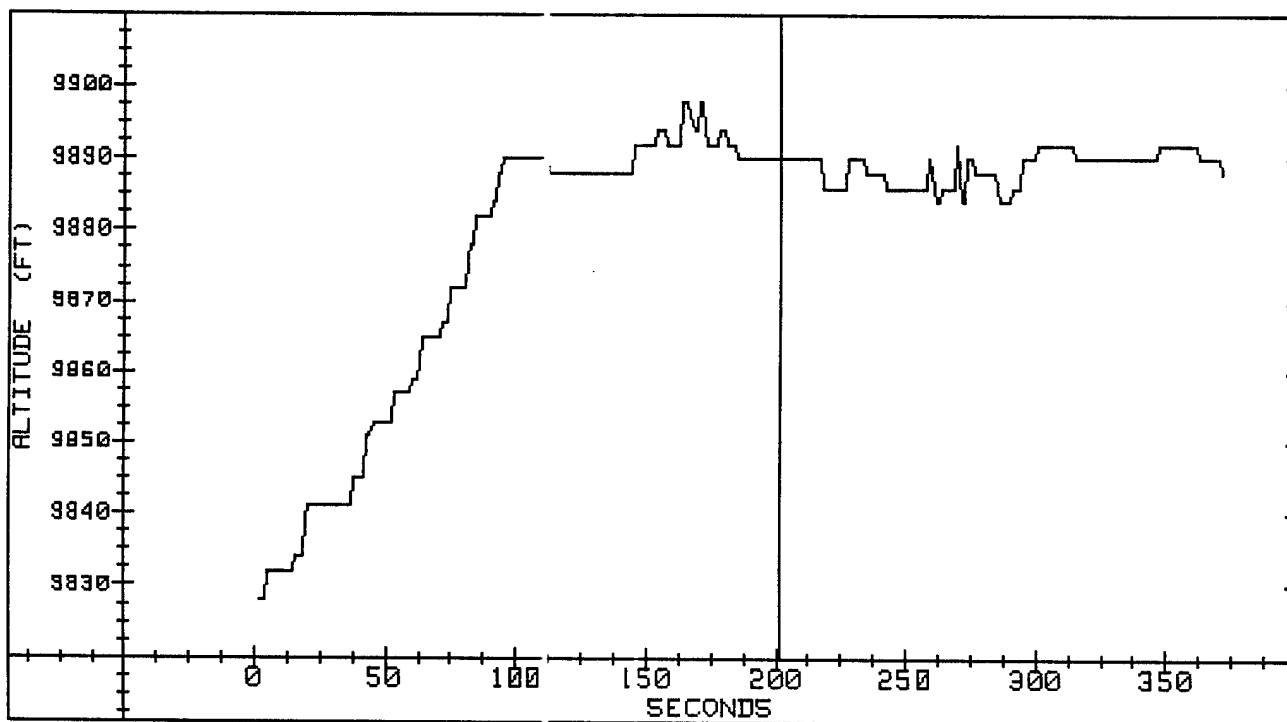
FILTERED vs. REF. VELOCITY  
DAY 179 TIME 1:58 PASS 22

ING  
LORAN  
GPS



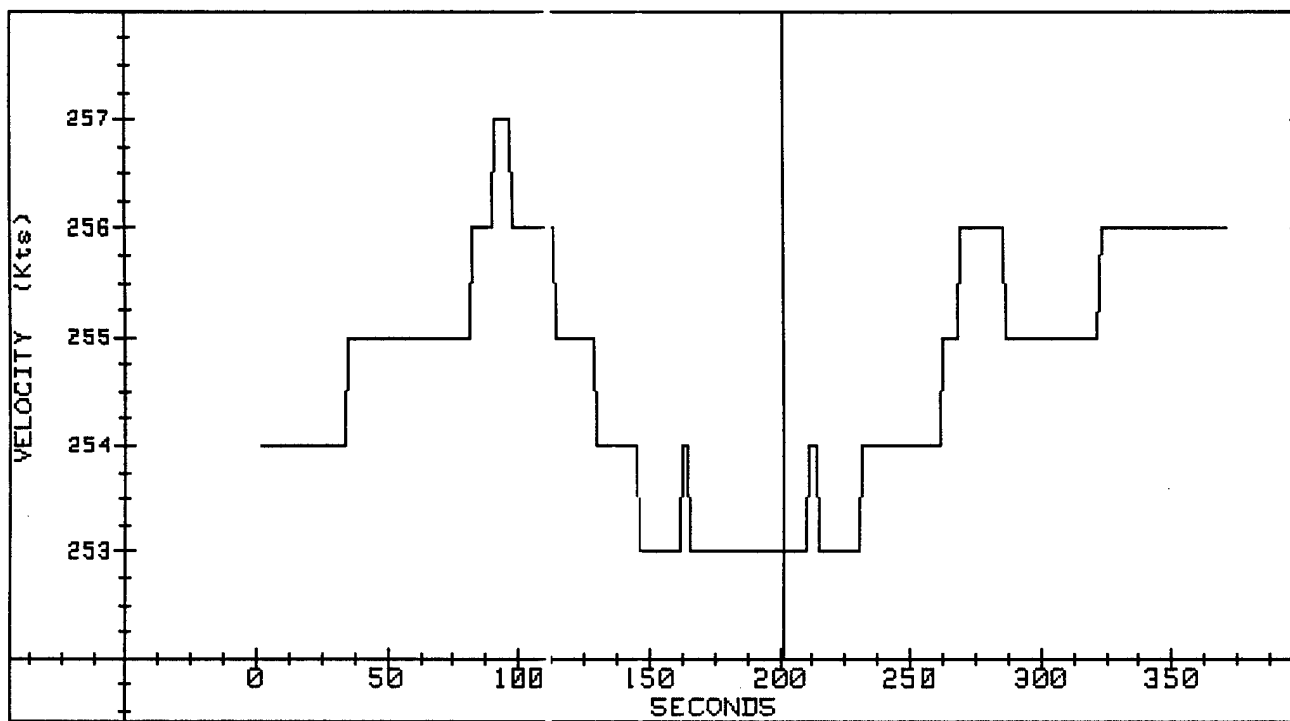
# HARO ALTITUDE

DAY 179 TIME 1:50 PASS 22 m- 9889, sd- 2.4243



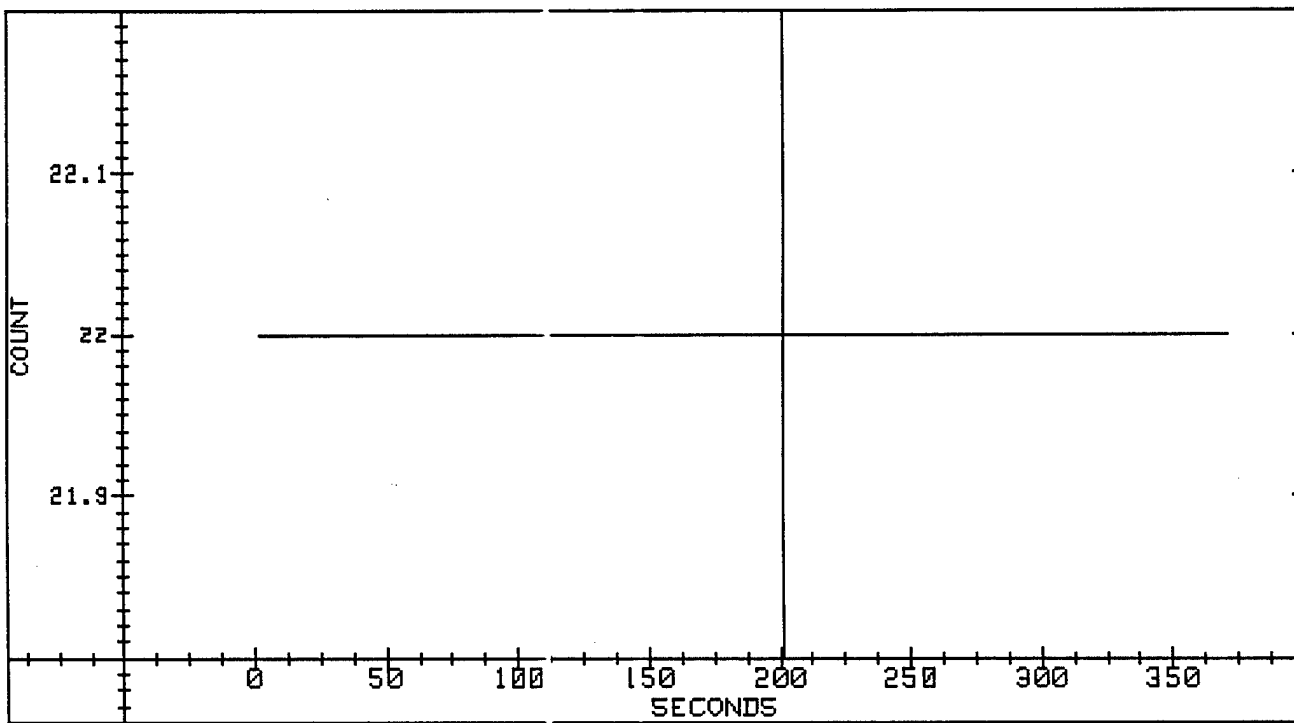
## INS GROUND SPEED

DRY 179 TIME 1:50 PASS 22 m= 255.1, sd= .995432



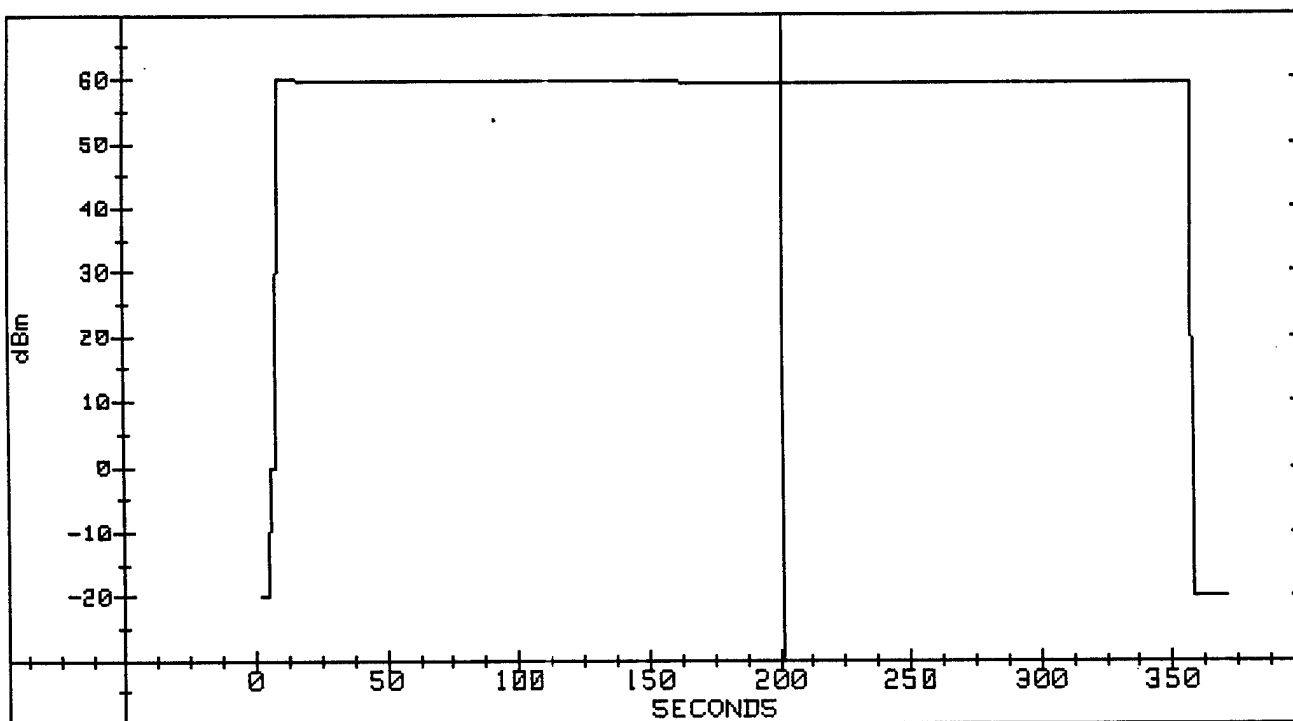
## PASS NUMBER

DAY 179 TIME 1:50 PASS 22 m= 22, sd= 0



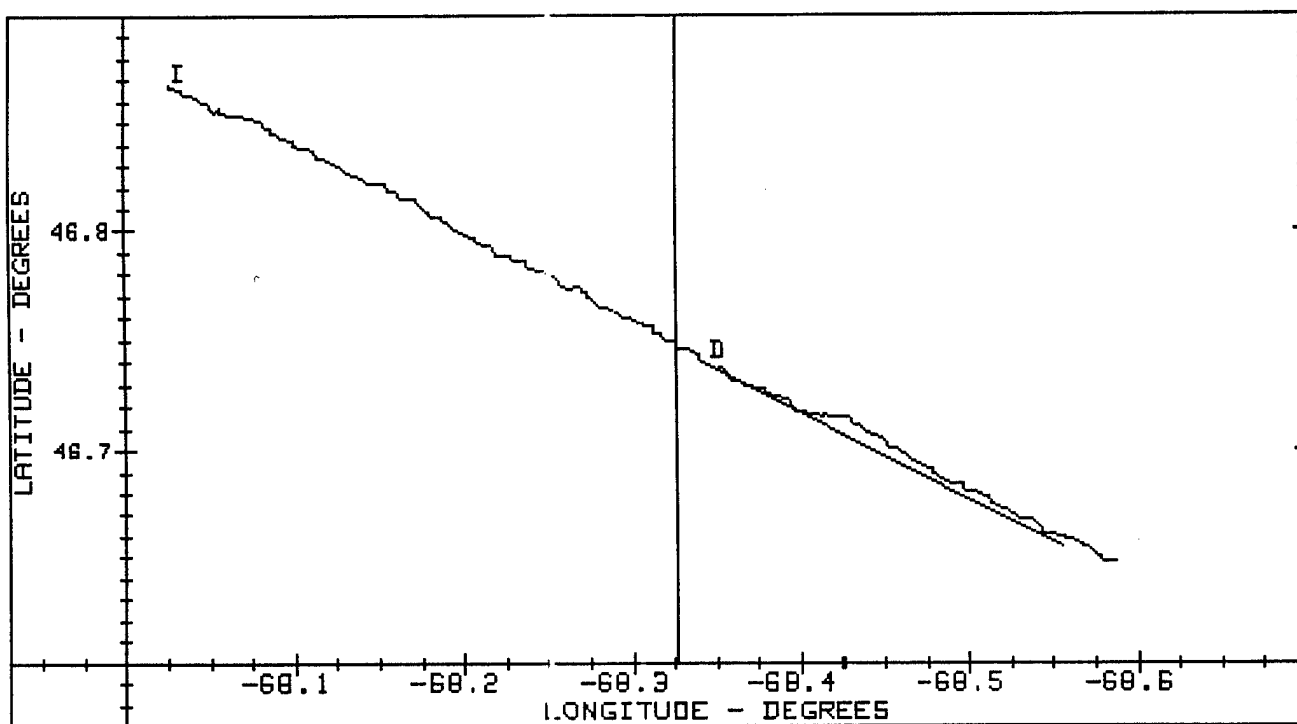
P Band Power

DRY 179 TIME 1:58 PASS 22 m= 52.21, sd= 22.7538



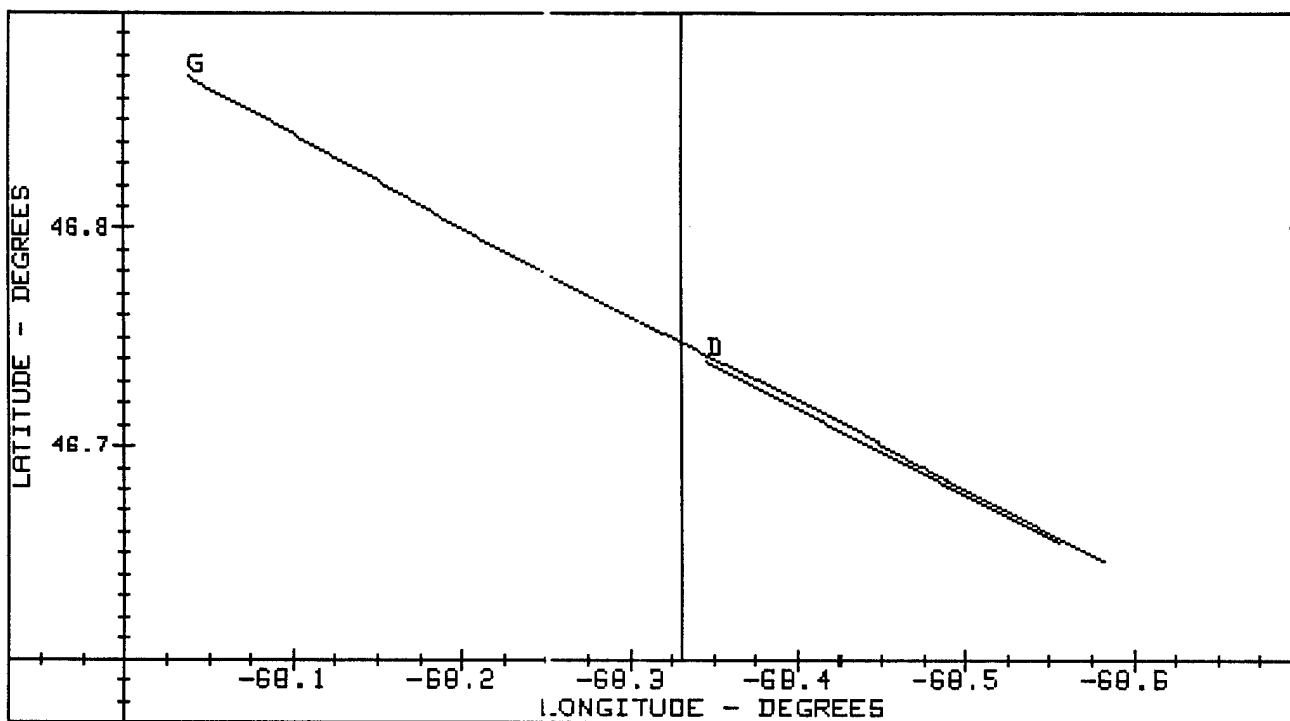
INS AIRCRAFT POSITION

DAY 179 TIME 1:58 PASS 22



GPS AIRCRAFT POSITION

DAY 179 TIME 1:58 PASS 22



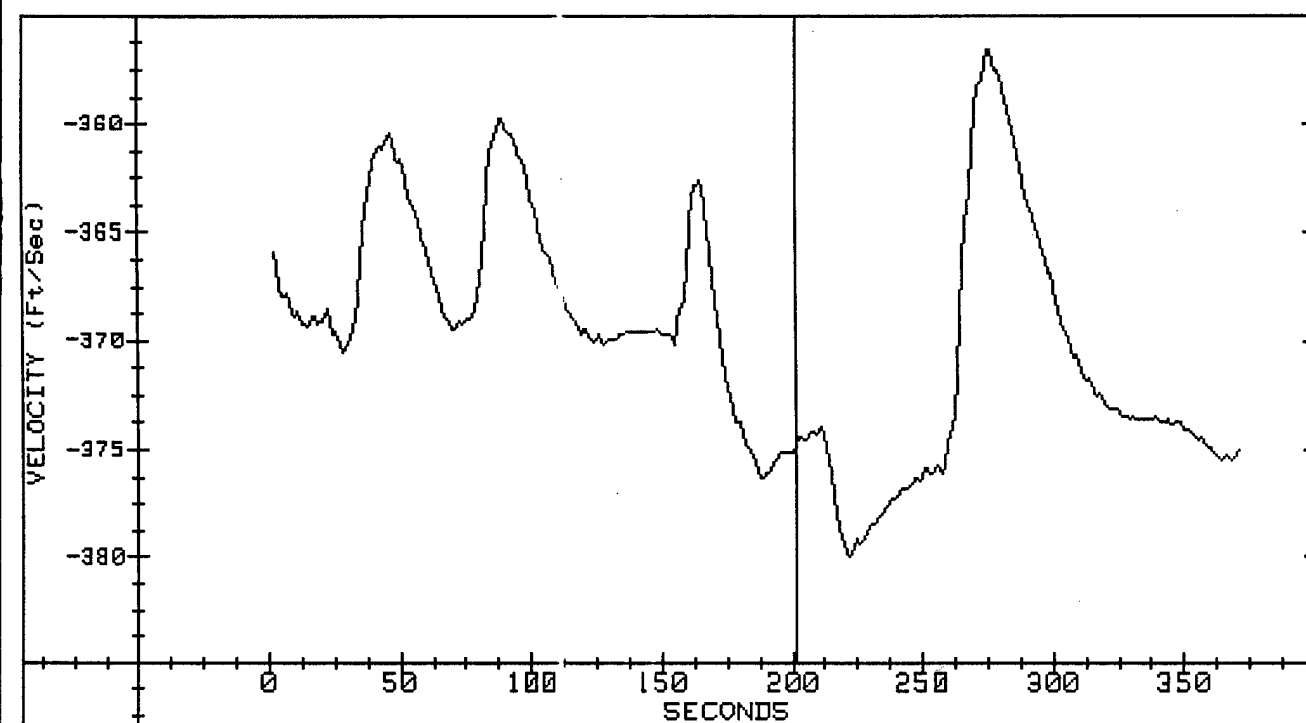
GPS V<sub>e</sub>

DRY 179

TIME 1:50

PASS 22

m= -371.7, sd= 6.2540

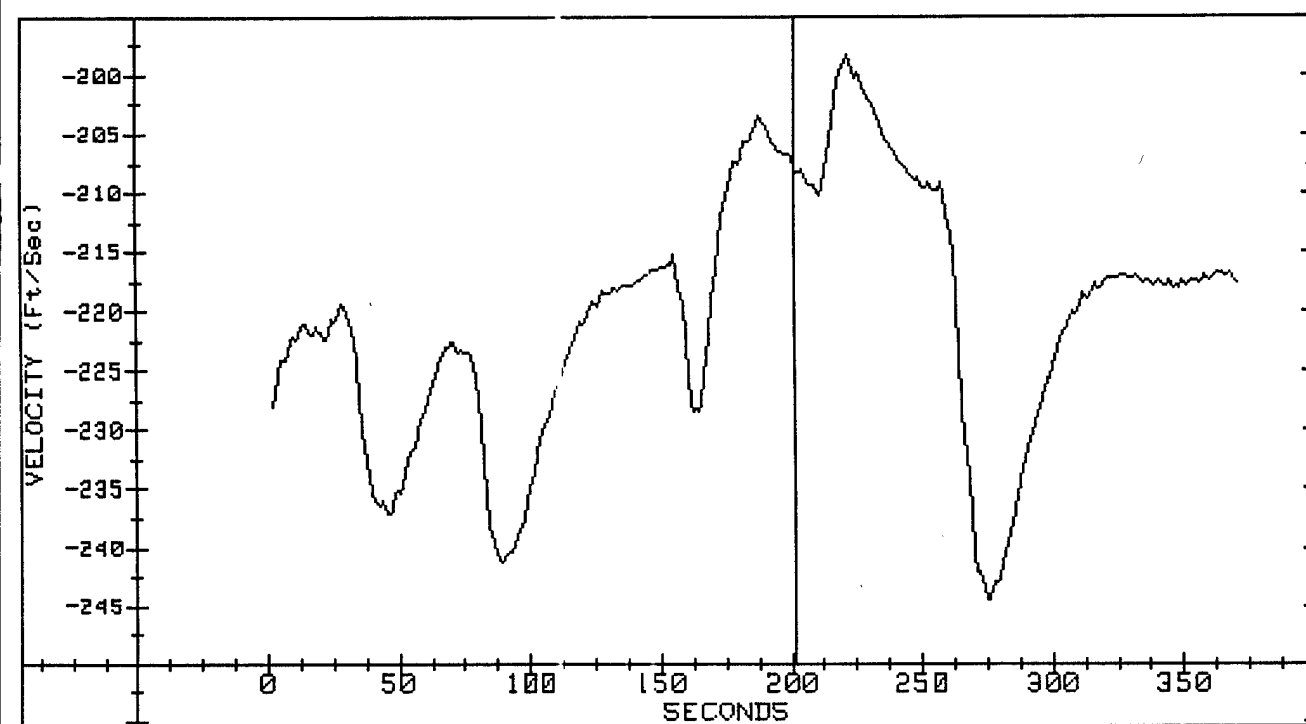


GPS Vn

DAY 179 TIME 1:58

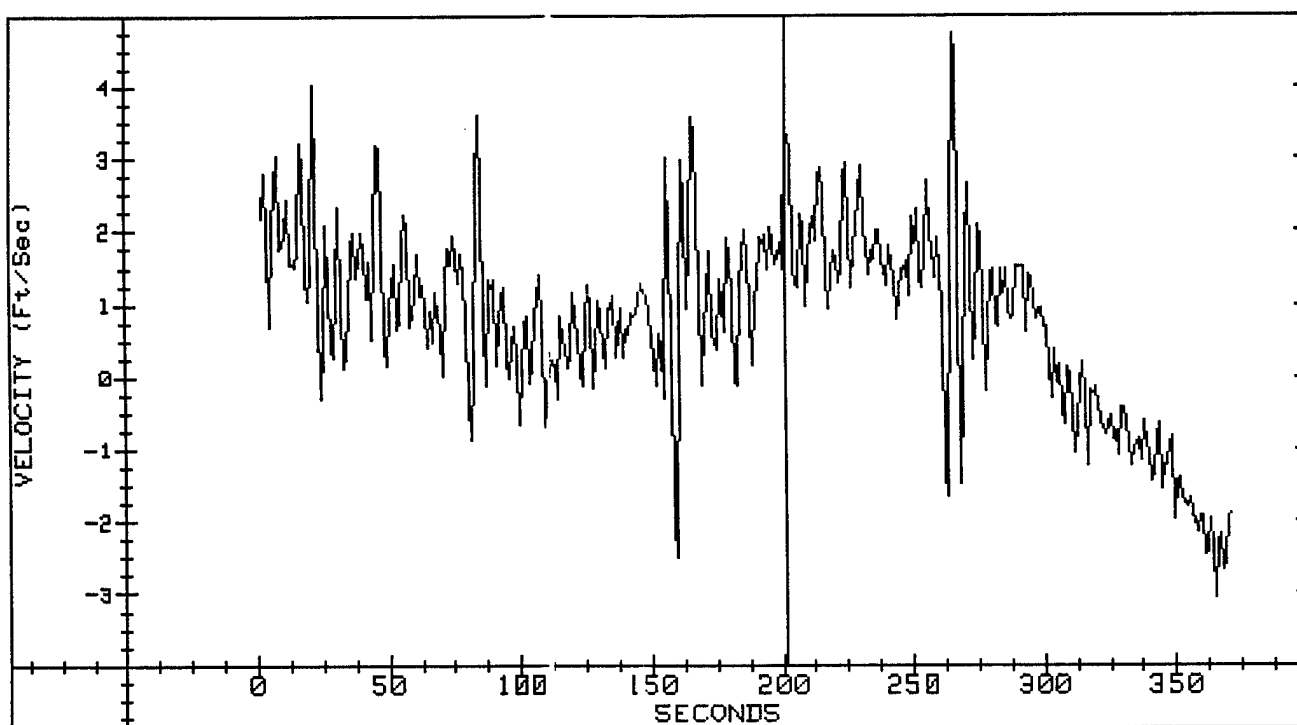
PASS 22

m= -210.4, sd= 11.5367



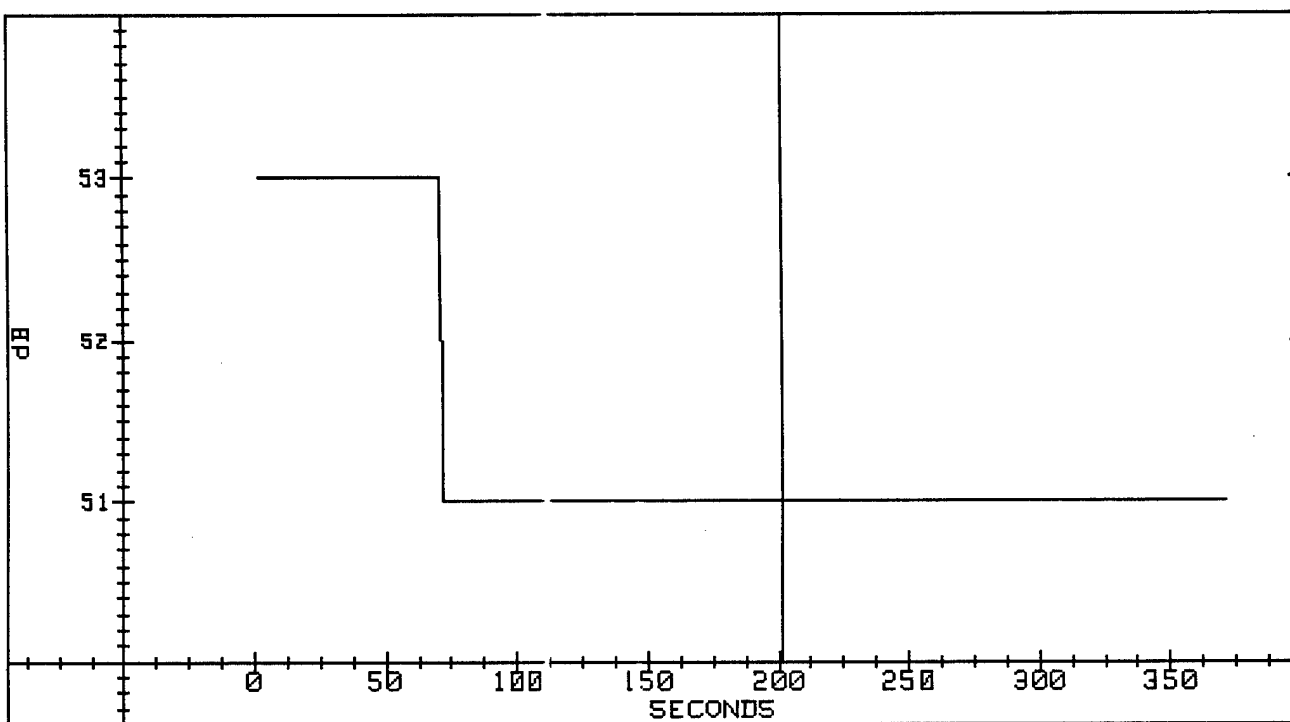
GPS Vv

DAY 179 TIME 1:50 PASS 22 m= .2944, sd= 1.5232



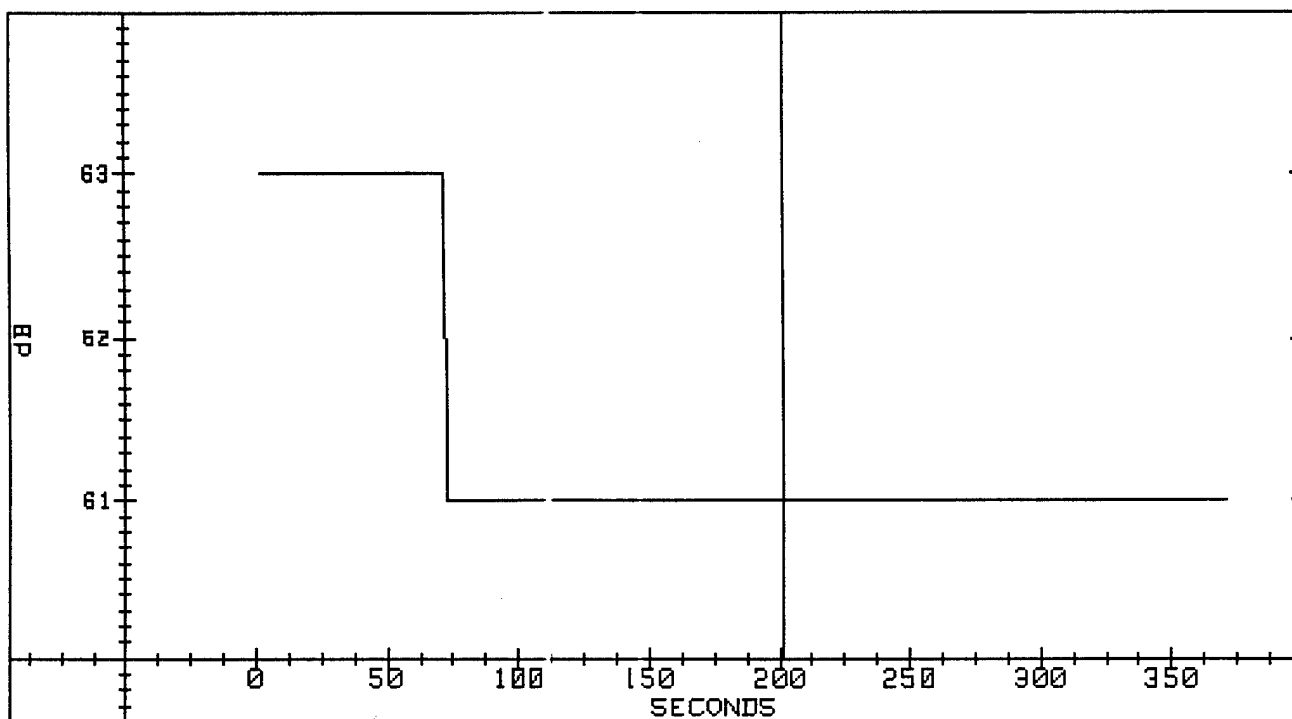
Ch1 RES Attenuation

DAY 179 TIME 1:50 PASS 22 m= 51, sd= 0



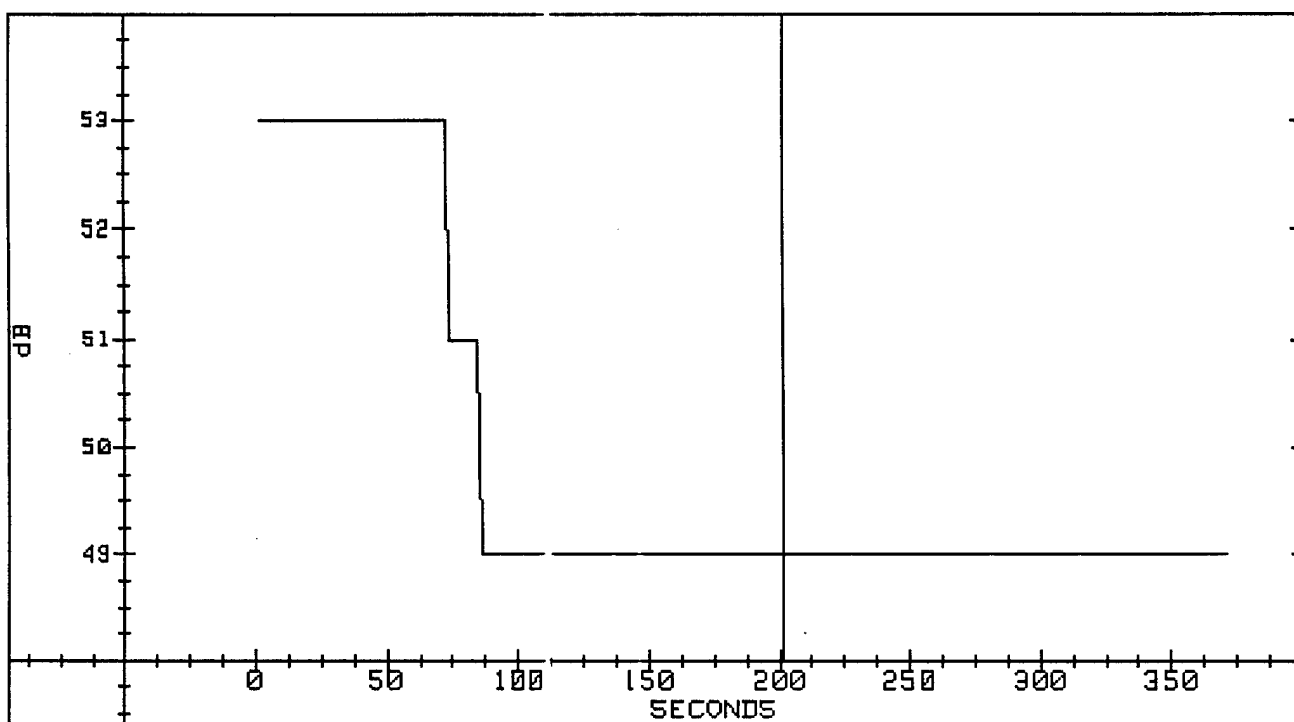
Ch2 RES Attenuation

DAY 179 TIME 1:50 PASS 22 m= 61, sd= 0



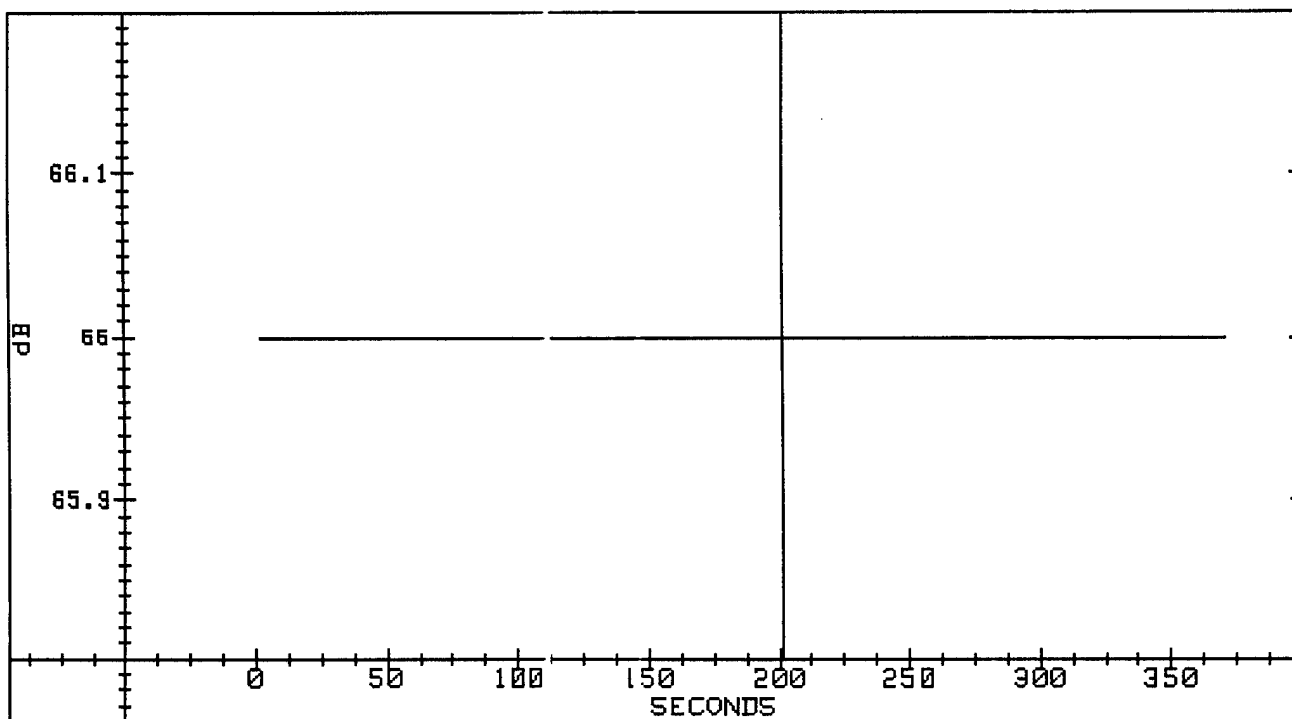
Ch3 RES Attenuation

DAY 179 TIME 1:50 PASS 22 m= 49, sd= 0



Ch4 RES Attenuation

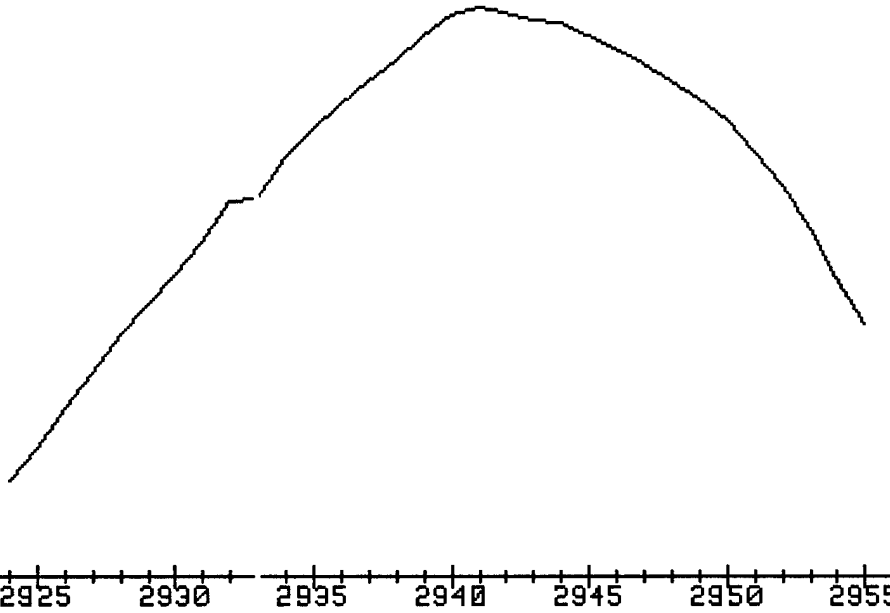
DAY 179 TIME 1:50 PASS 22 m= 66, sd= 0



## GPS ALTITUDE

MEAN= 10140.2 STANDARD DEVIATION= 33.7455

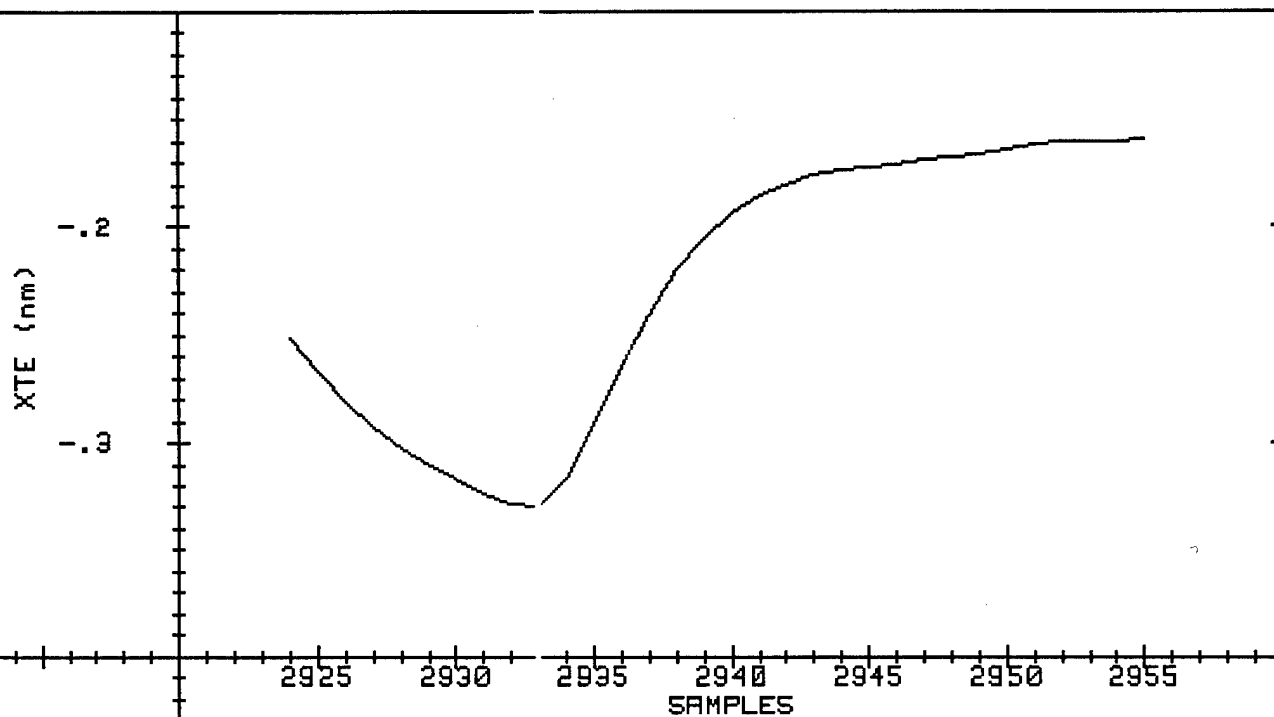
DATE: June 27, 1995 PASS 22

OFF  
ON  
BAR10180  
10160  
10140  
10120  
10100  
10080  
10060  
FEET2925 2930 2935 2940 2945 2950 2955  
SAMPLES

GPS Cross Track Error

MEAN= -.225959 STANDARD DEVIATION= .0631978

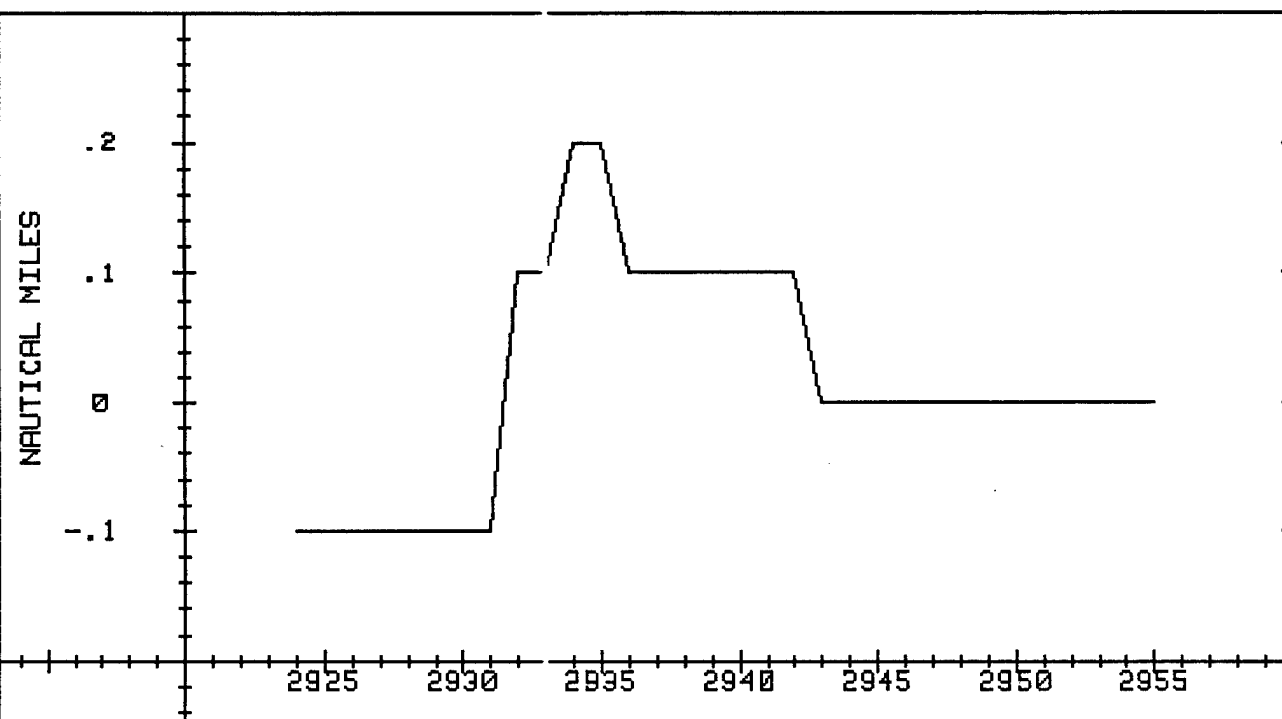
DATE: June 27, 1995 PASS 22



INS CROSS TRACK ERROR

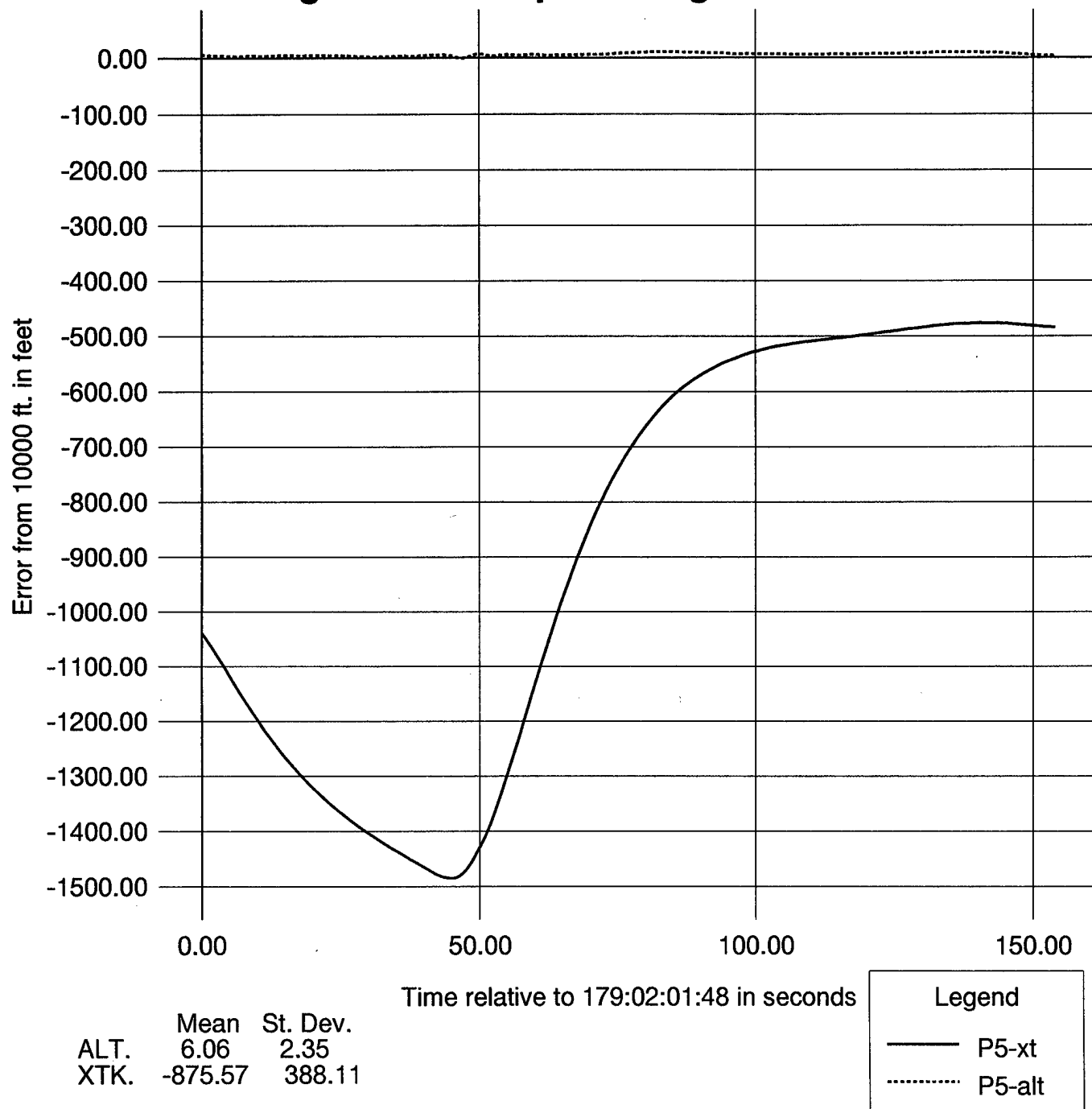
MEAN- .015625 STANDARD DEVIATION- .0069963

DATE: June 27, 1995 PASS 22



# Portage, ME - June 27, 1995 - Pass 22 - Xtk. and Alt. Errors

Higher alt. and port are greater than zero



28 Jun 1995  
Tape: 1441

Post-line Data Sheet  
Line 31  
Mission: Presque Isle DAY 3

Time: 179:02:16:28  
Pass 23  
Req.# 16

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	10000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	9903 ft s.d.=	2 Swath Ctr Ang:	30.0°	30.0°	30.0°	30.0°
Slt. rng:	18460 ft	Tgt Dep Ang:	30.0°	30.0°	30.0°	30.0°
Look:	Right	St rng (ft):	16922	16922	16922	16922
Depr Ang:	25.0°	Near Rng Dep:	35.8°	35.8°	35.8°	35.8°
Des. trk:	300.0°	Far Rng Dep:	17.4°	17.4°	17.4°	17.4°
Start Sq:	90.0°	Atten (dB):	55.0	60.0	54.0	65.0
End Sq:	90.0°	RMS Video (%FS)	23.3	15.8	21.9	12.4

#### WAYPOINTS

Line_up:	N 46:33.32	W 68:09.55	Main Target:	IE
Start:	N 46:39.35	W 68:24.60	Mocomp Point:	
End:	N 46:44.34	W 68:37.19	Lat:	N 46:44.12
			Long:	W 68:28.98
From:	N 36:47.45	W 50:29.32	Tgt Trk:	0.0
To:	N 52:42.60	W 92:36.70	Tgt Vel:	0.0
			Alt:	770.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	->	10 sec
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)	
Swath width:	Single	Ave Gndspd:	Real	-> 247.4 kts
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4	
Position Reference:	ON	GPS Vel/Pos Reference		
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft	
Range Gate Delta:	0.0 ft	Range Tracking is	OFF	
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF	
TX Chirp Filename:	CTLAU2B	RX Chirp Filename:	CRL1NOA	

Ave Ref Vel -> 5.3 fps (s.d.= 9.6)  
Ave Fil Vel -> 8.9 fps (s.d.= 9.0)

NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation: 0.0°	Starting: 3918 ft	(1)
L: -70.0	Azimuth: 0.0°	Ending: 5121 ft	(1)
C: -70.0	Pitch: 0.0°		
P: 40.8			

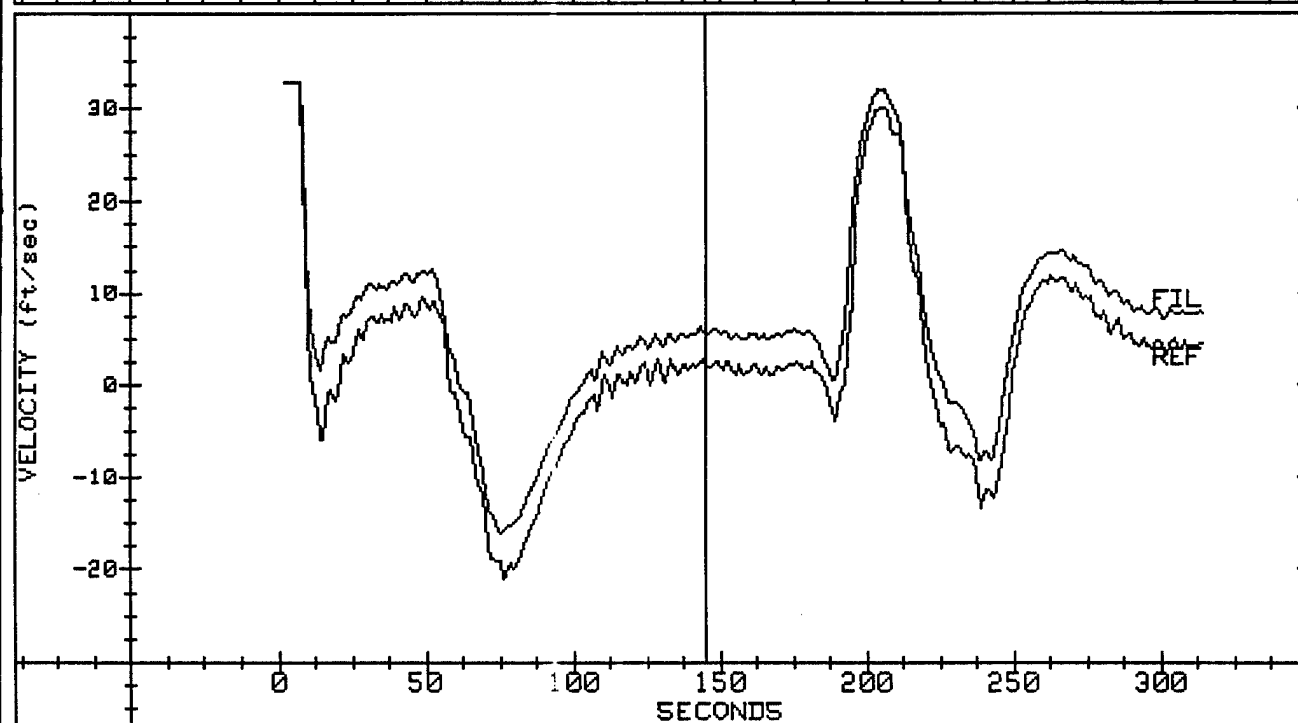
Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 2079.0	X: 63.8 dB	Start: 02:16:28
Y: 1867.0	L: 63.8 dB	End: 02:19:09
Z: 17142.0	C: 63.8 dB	

#### Mocomp Counters

Start:	1366879	0014DB5Fh	CPA (UCT):	00:00:00
End:	1393891	001544E3h	Alt:	0 ft (GPS)
			Lat:	N 0:00: 0
			Lon:	E 0:00: 0

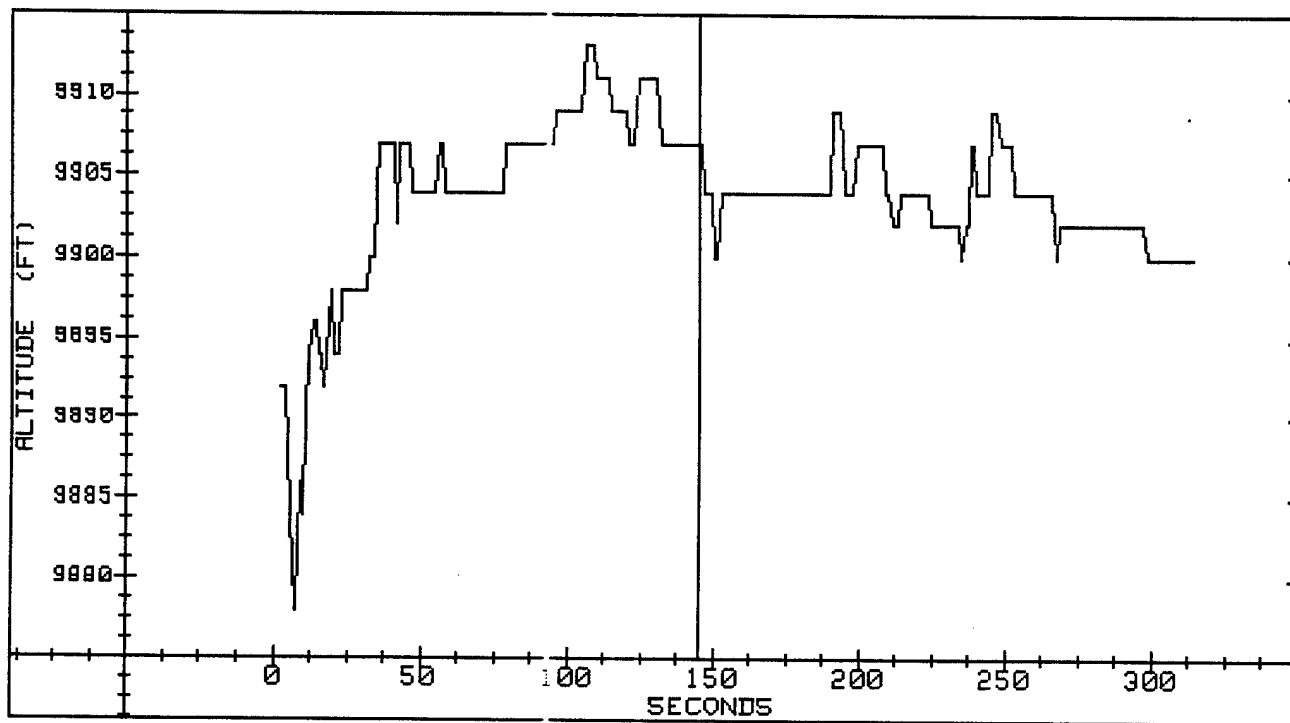
FILTERED vs. REF. VELOCITY  
DAY 179 TIME 2:13 PASS 23

INE  
LORAN  
GPS



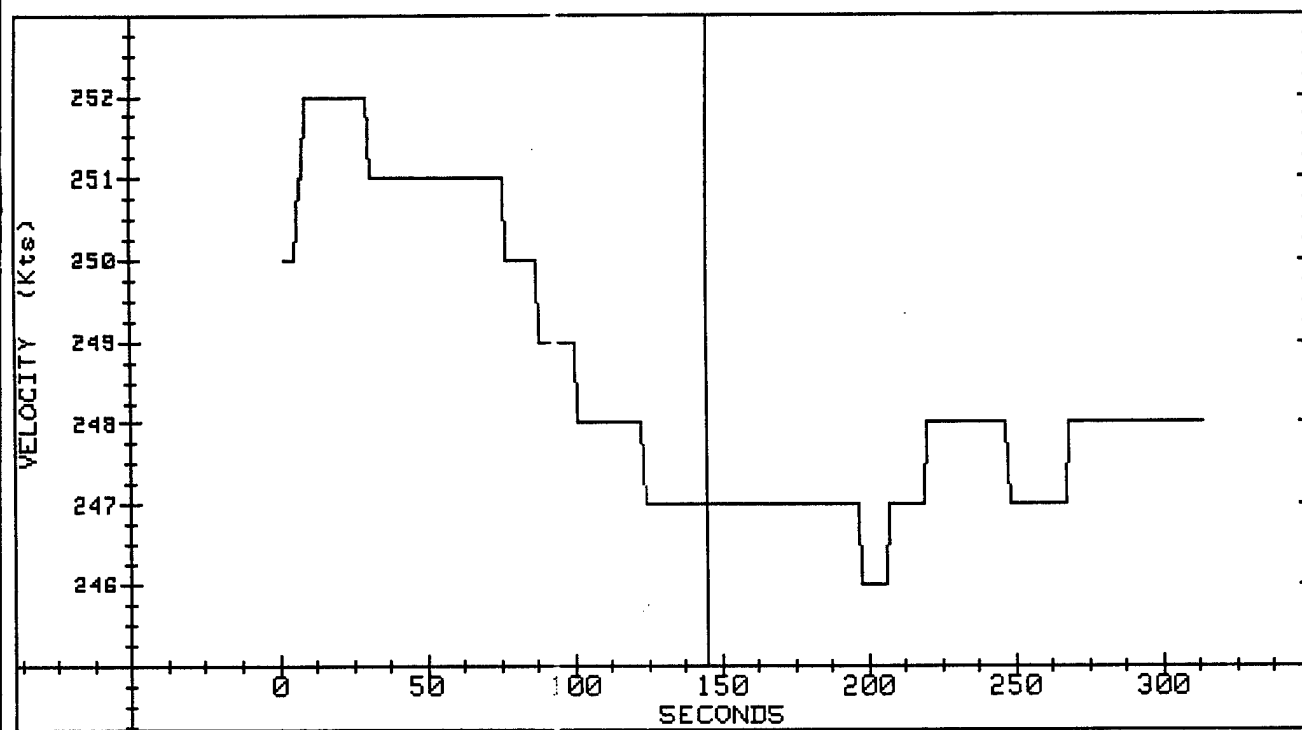
# BARO ALTITUDE

DAY 179 TIME 2:13 PASS 23 m= 9903, sd= 2.16008



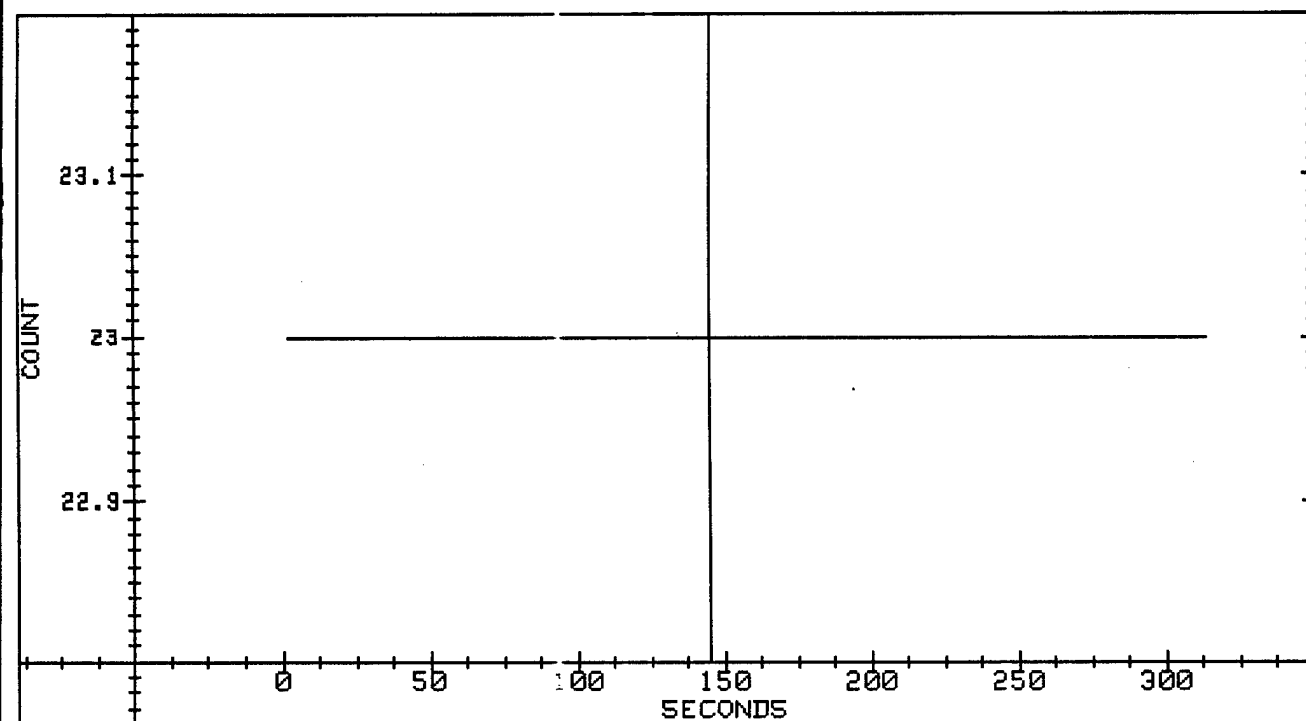
## INS GROUND SPEED

DRY 179 TIME 2:13 PASS 23 m= 247.4, sd= .593749



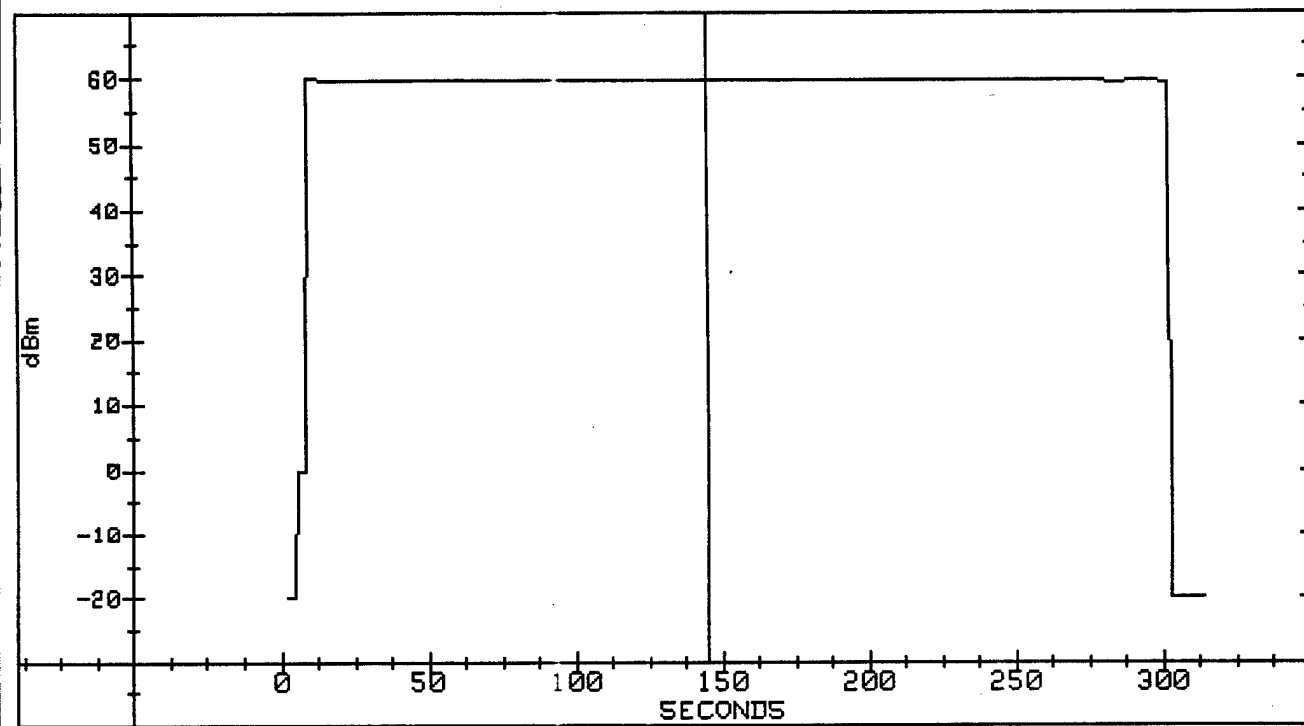
# PASS NUMBER

DAY 179 TIME 2:13 PASS 23 m= 23, sd= 0

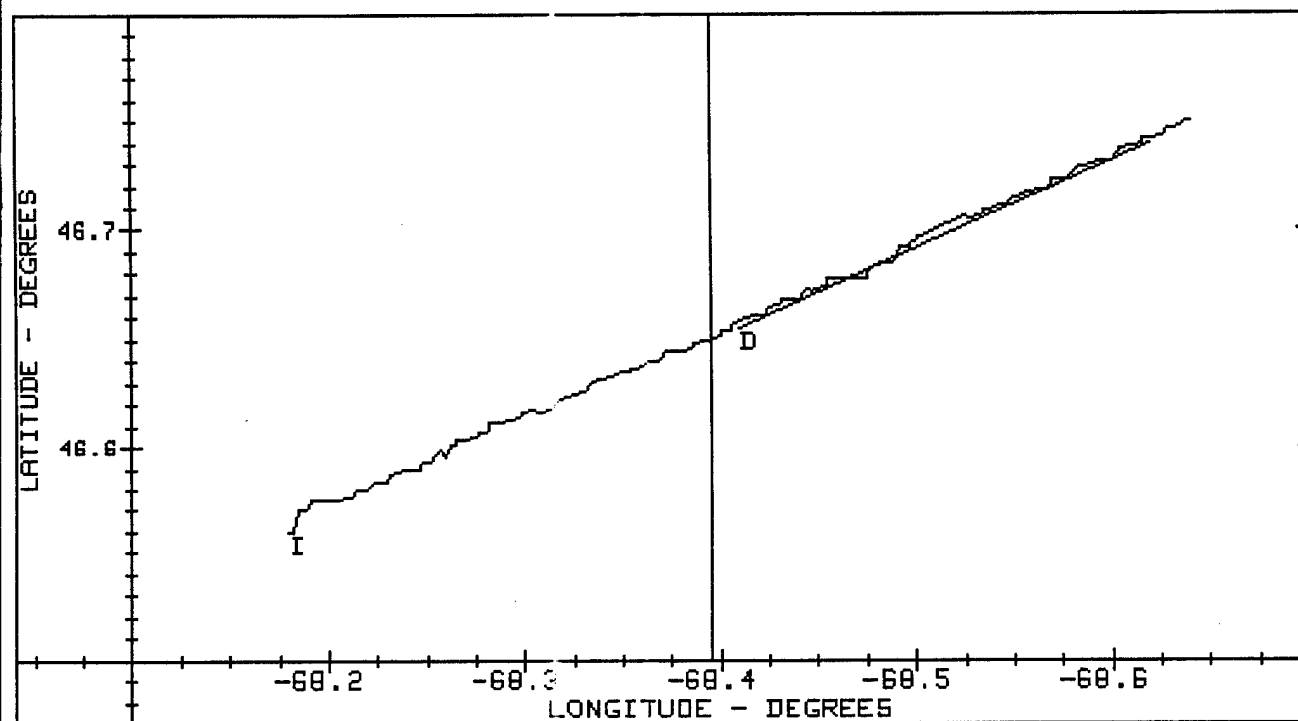


P Band Power

DAY 179 TIME 2:13 PASS 23 m= 53.6, sd= 20.8185

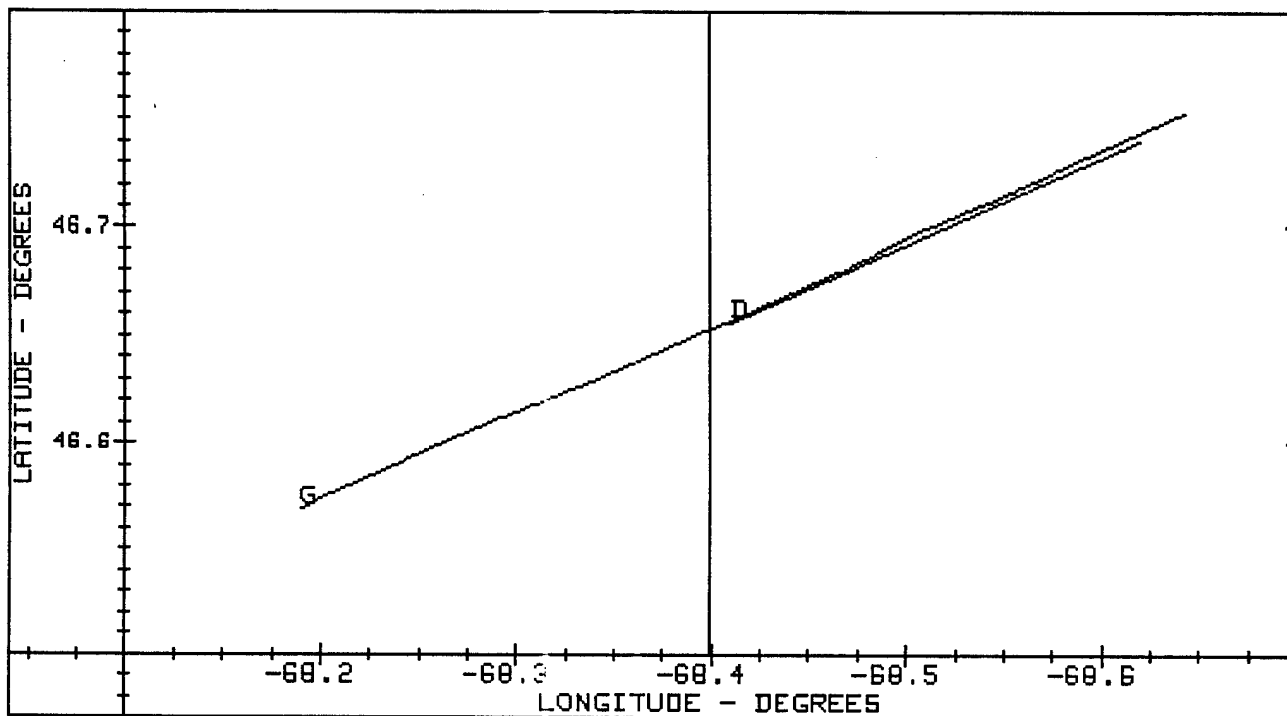


INS AIRCRAFT POSITION  
DAY 179 TIME 2:13 PASS 23



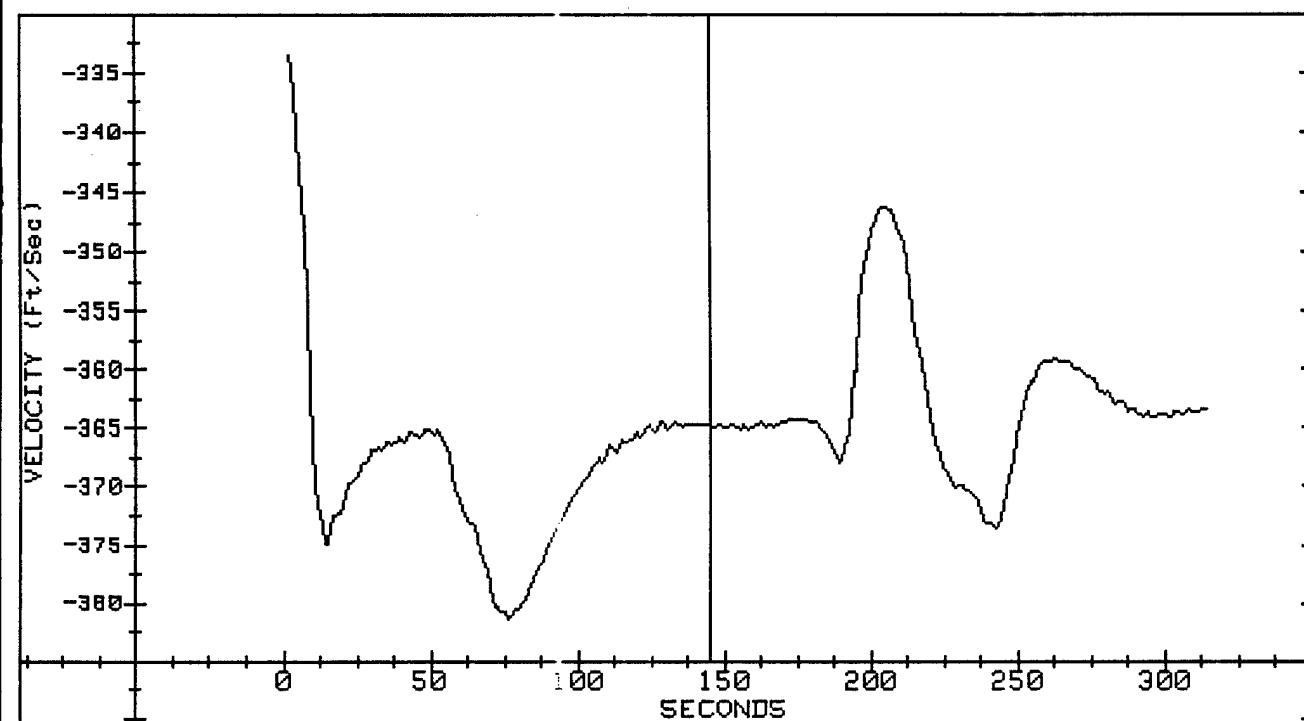
GPS AIRCRAFT POSITION

DAY 179 TIME 2:13 PASS 23



## GPS Vc

DAY 179 TIME 2:13 PASS 23 m= -362.7, sd= 6.09134

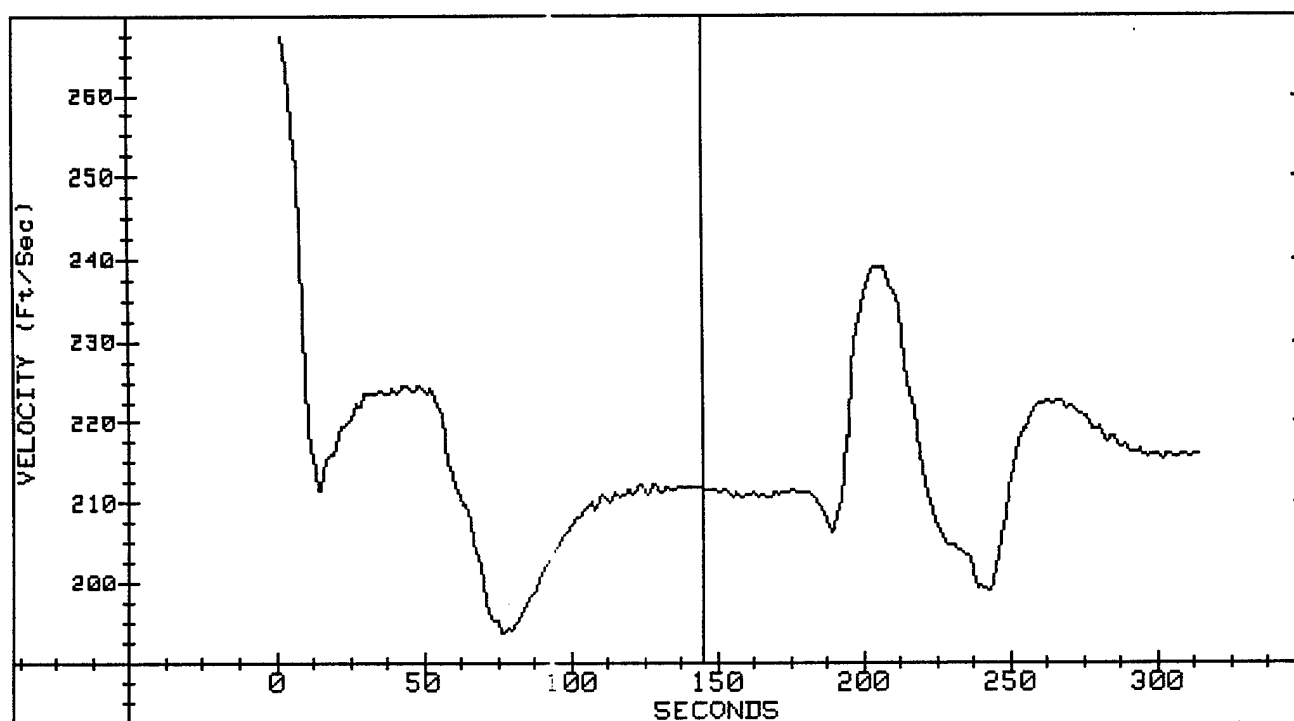


GPS Vn

DAY 179 TIME 2:13

PASS 23

m= 216, sd= 9.26844



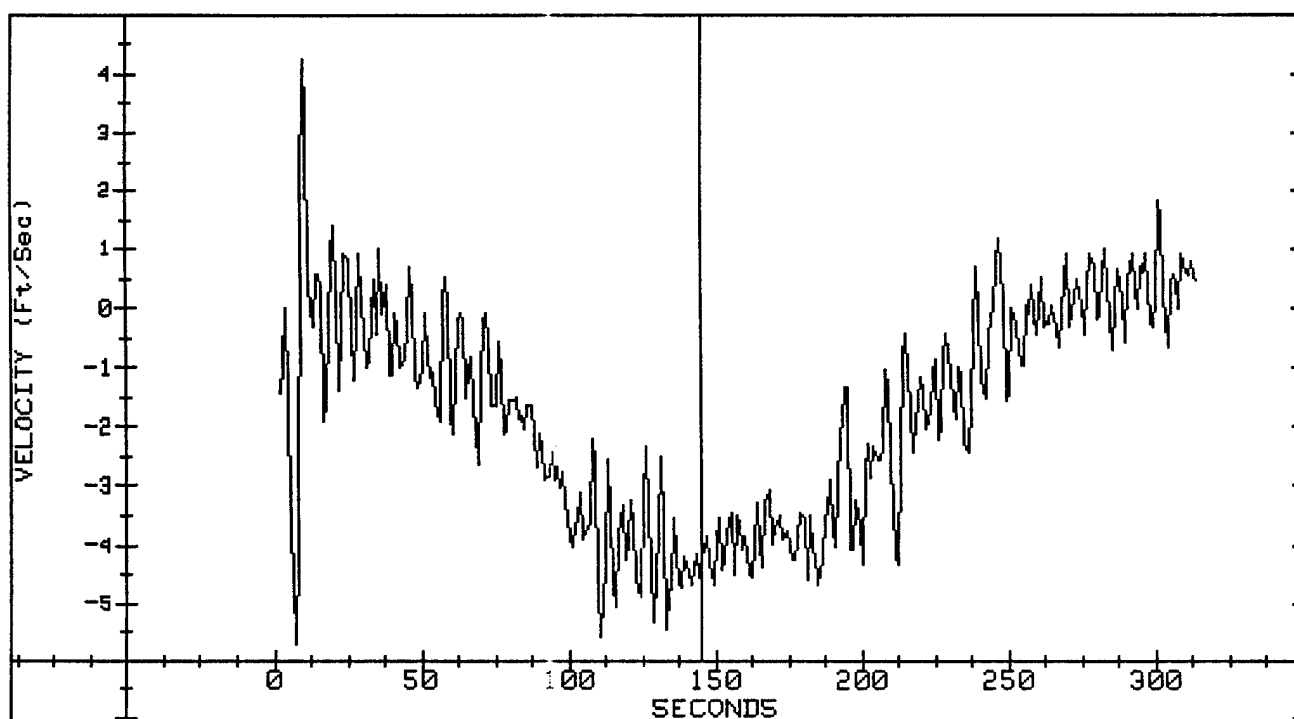
GPS Vv

DAY 179

TIME 2:13

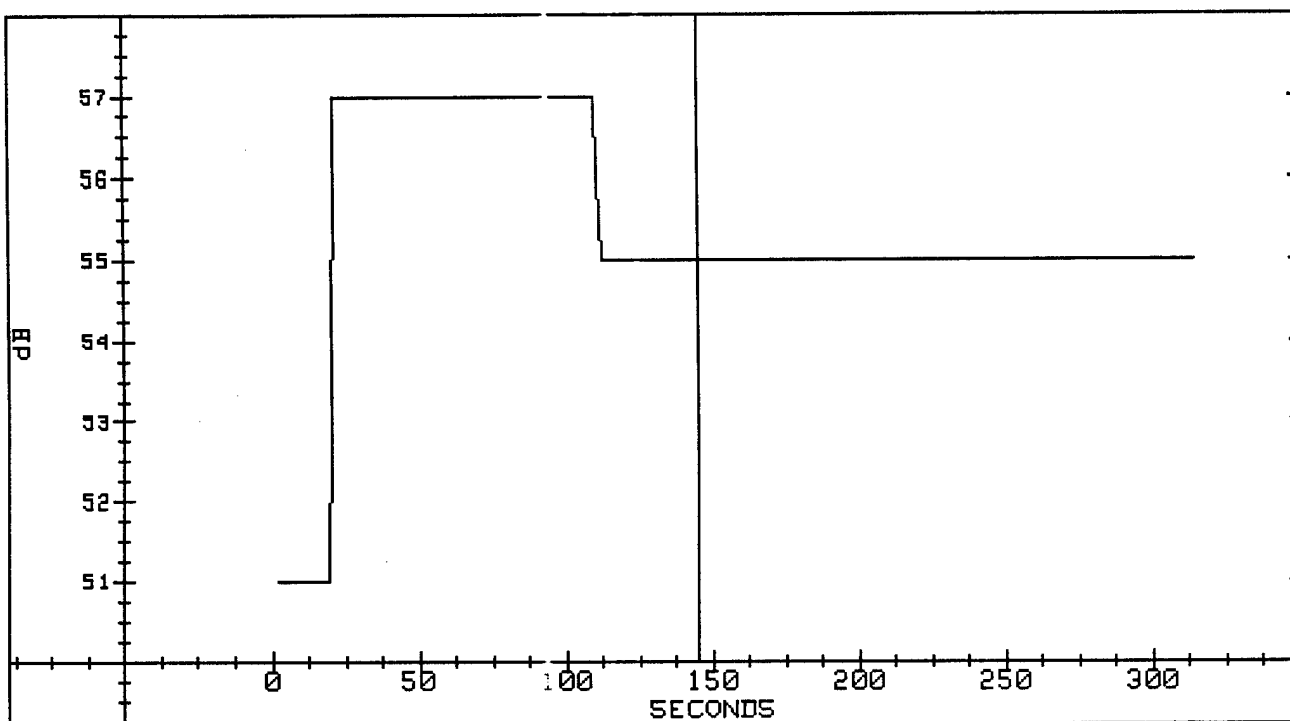
PASS 23

m= -1.45, sd= 1.7963



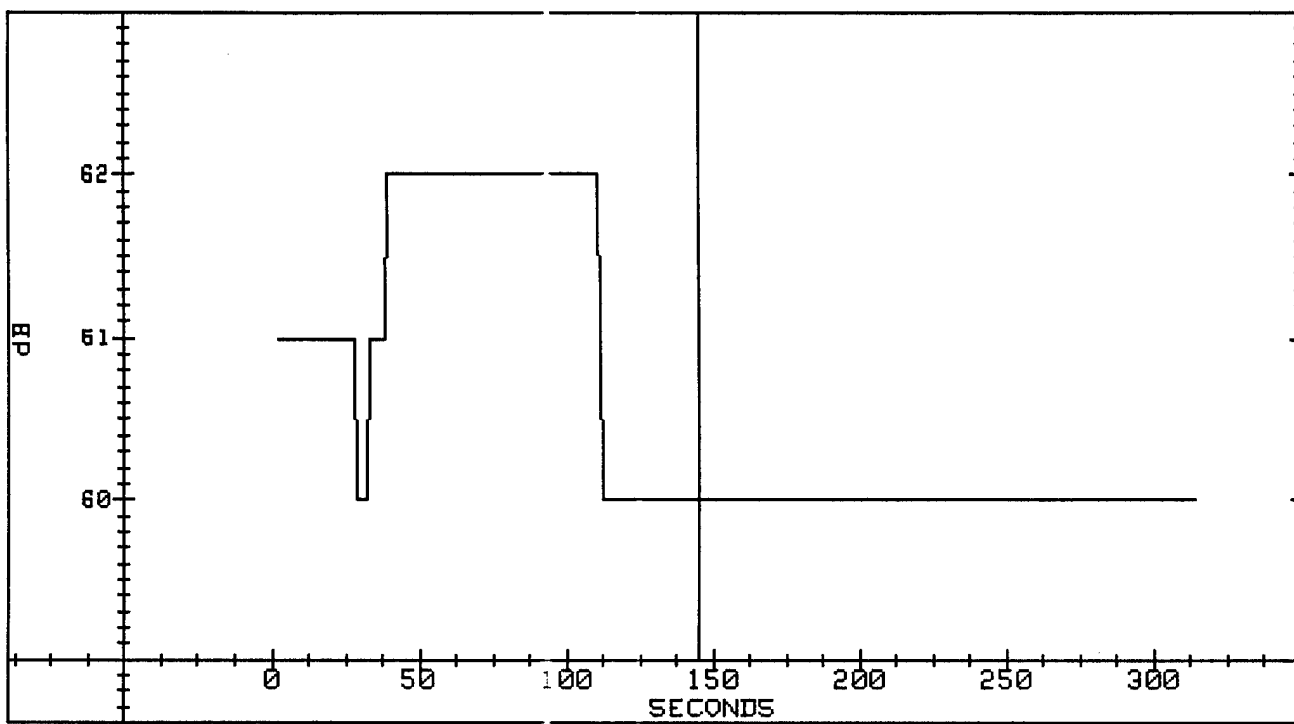
Ch1 RES Attenuation

DAY 179 TIME 2:13 PASS 23 m= 55, sd= 0



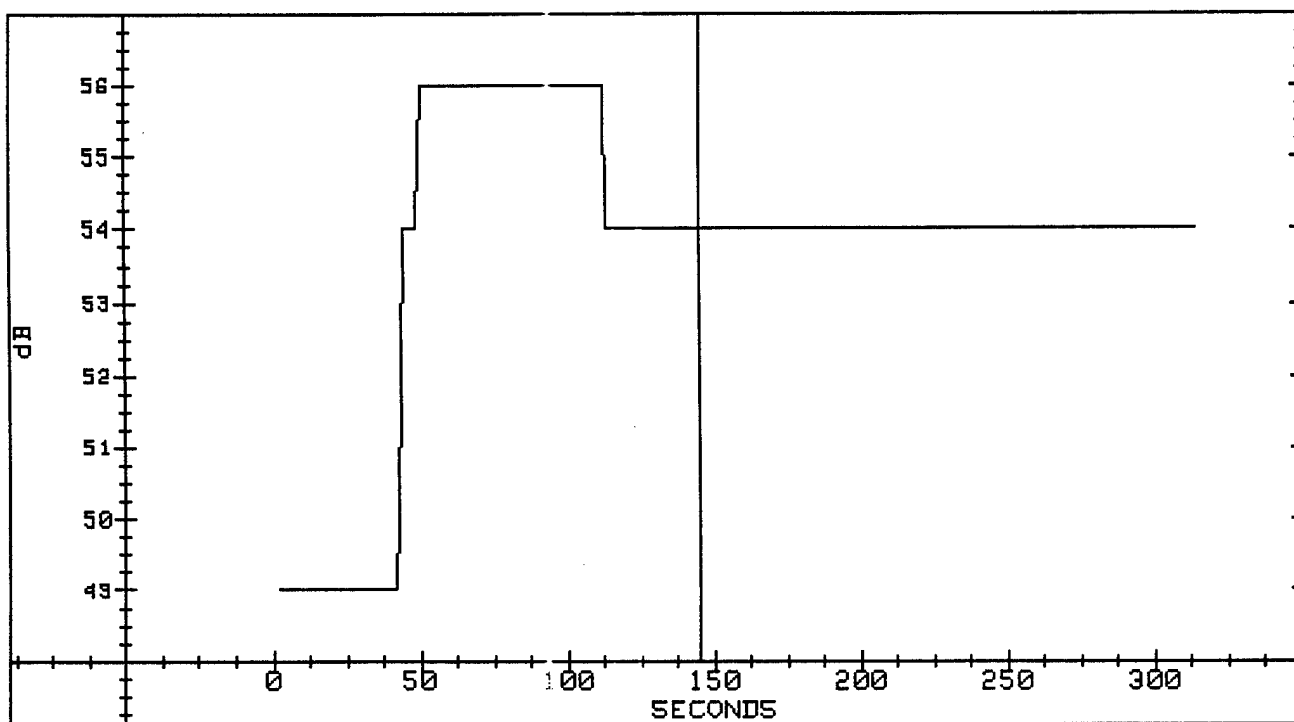
Ch2 RES Attenuation

DAY 179 TIME 2:13 PASS 23 m= 60, sd= 0



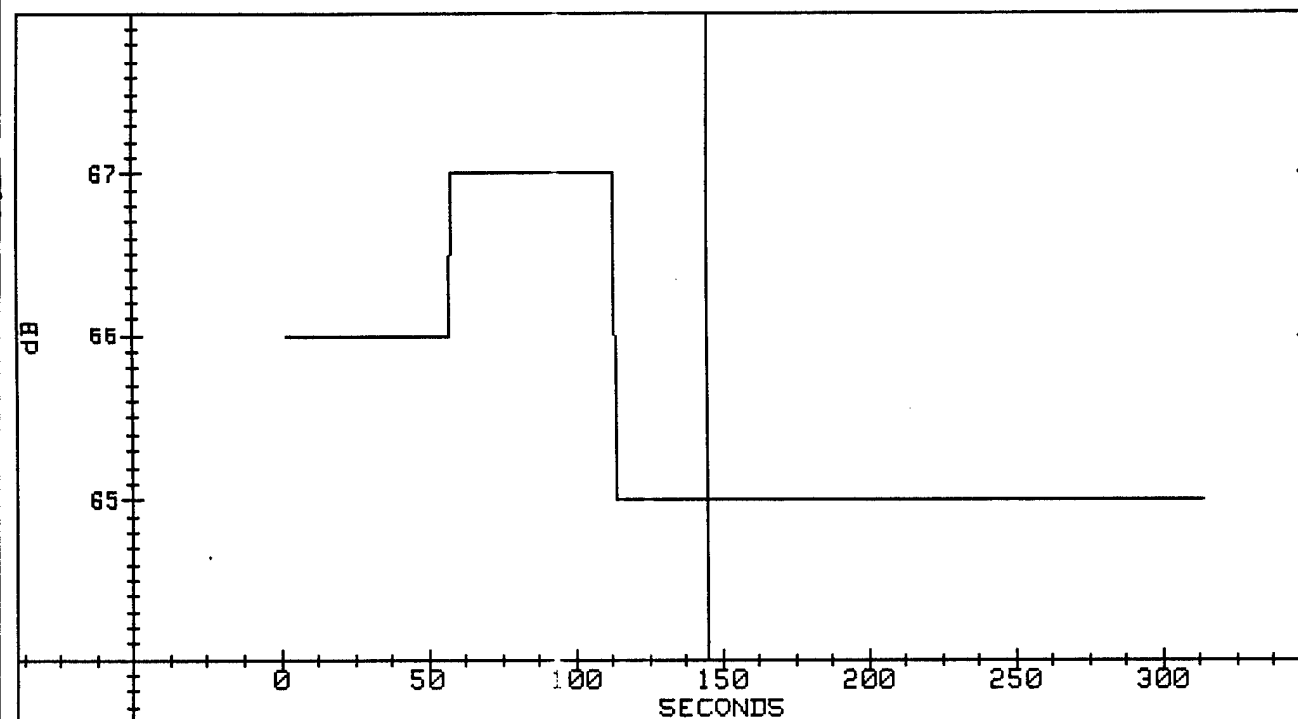
Ch3 RES Attenuation

DAY 179 TIME 2:13 PASS 23 m= 54, sd= 0



Ch4 RES Attenuation

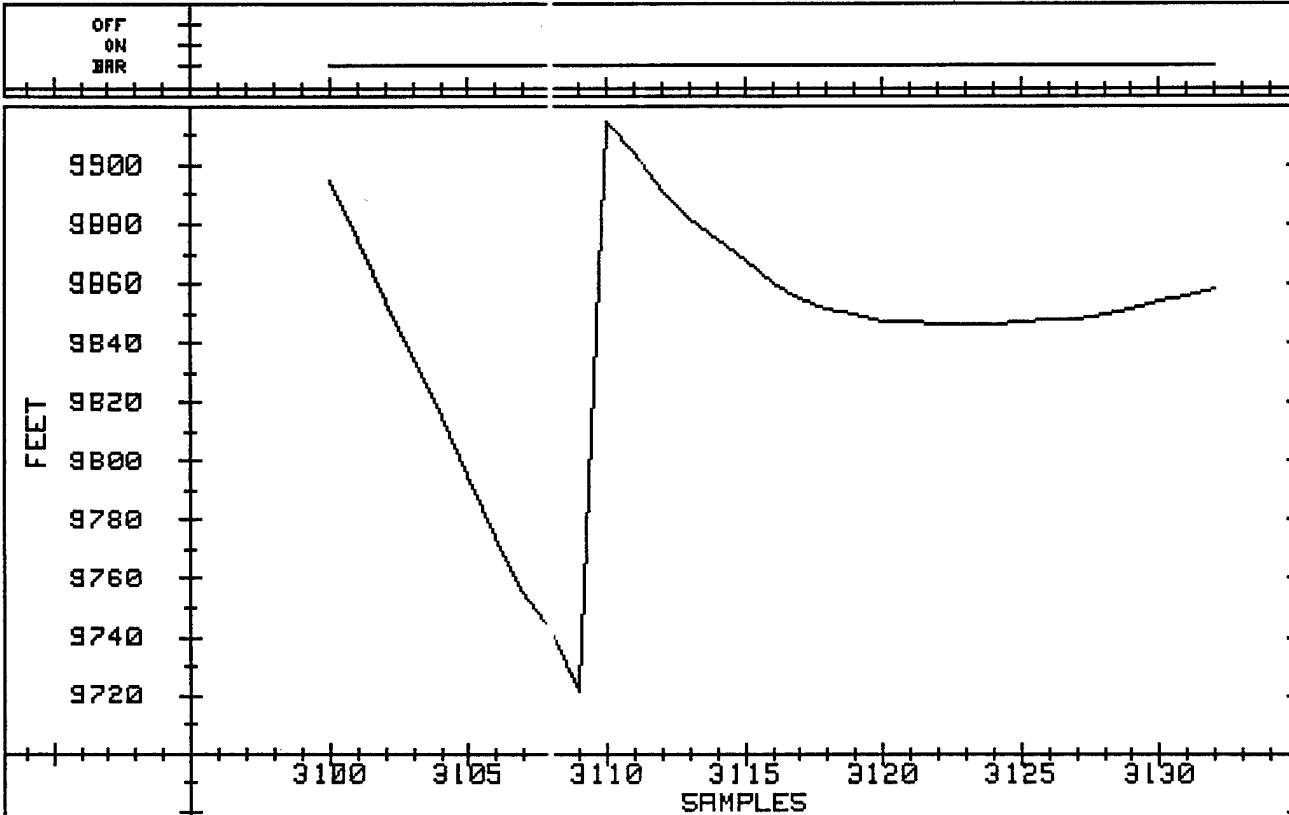
DAY 179 TIME 2:13 PASS 23 m= 65, sd= 0



## GPS ALTITUDE

MEAN= 9844.12 STANDARD DEVIATION= 42.7209

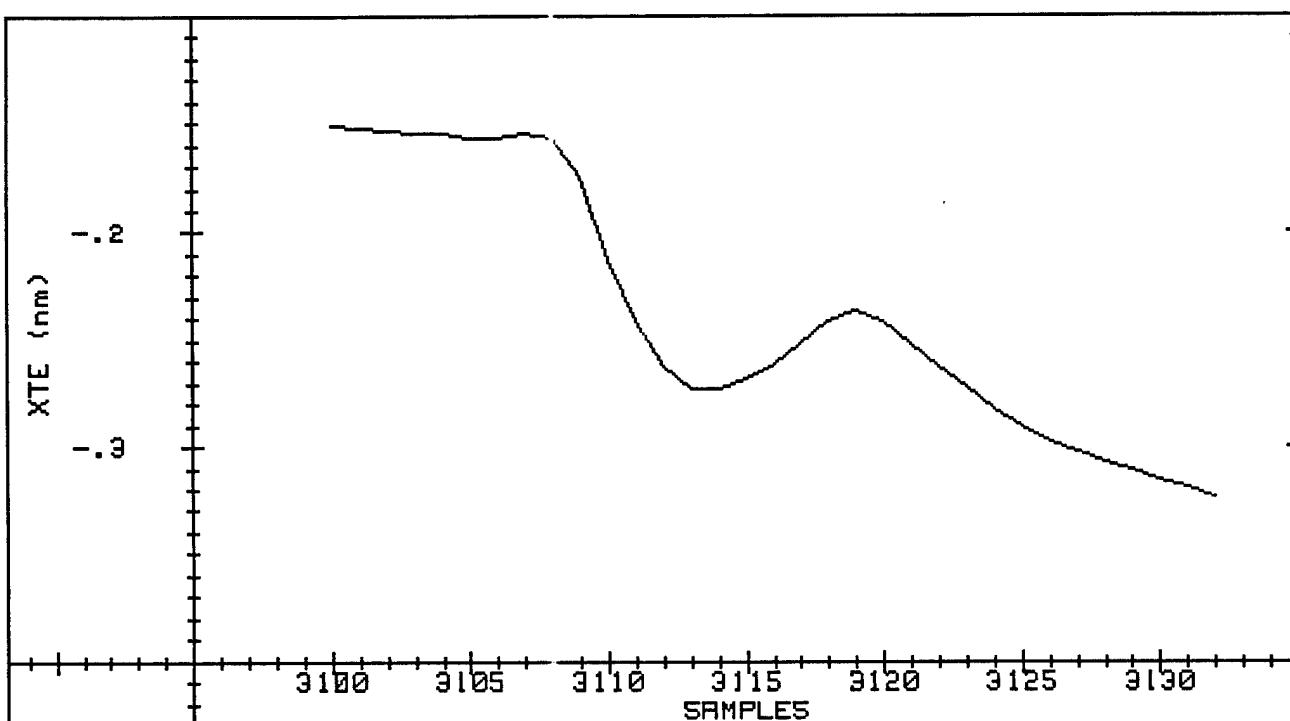
DATE: June 27, 1995 PASS 23

OFF  
ON  
BARFEET  
9900  
9880  
9860  
9840  
9820  
9800  
9780  
9760  
9740  
97203100 3105 3110 3115 3120 3125 3130  
SAMPLES

GPS Cross Track Error

MEAN= -.238121 STANDARD DEVIATION= .0592646

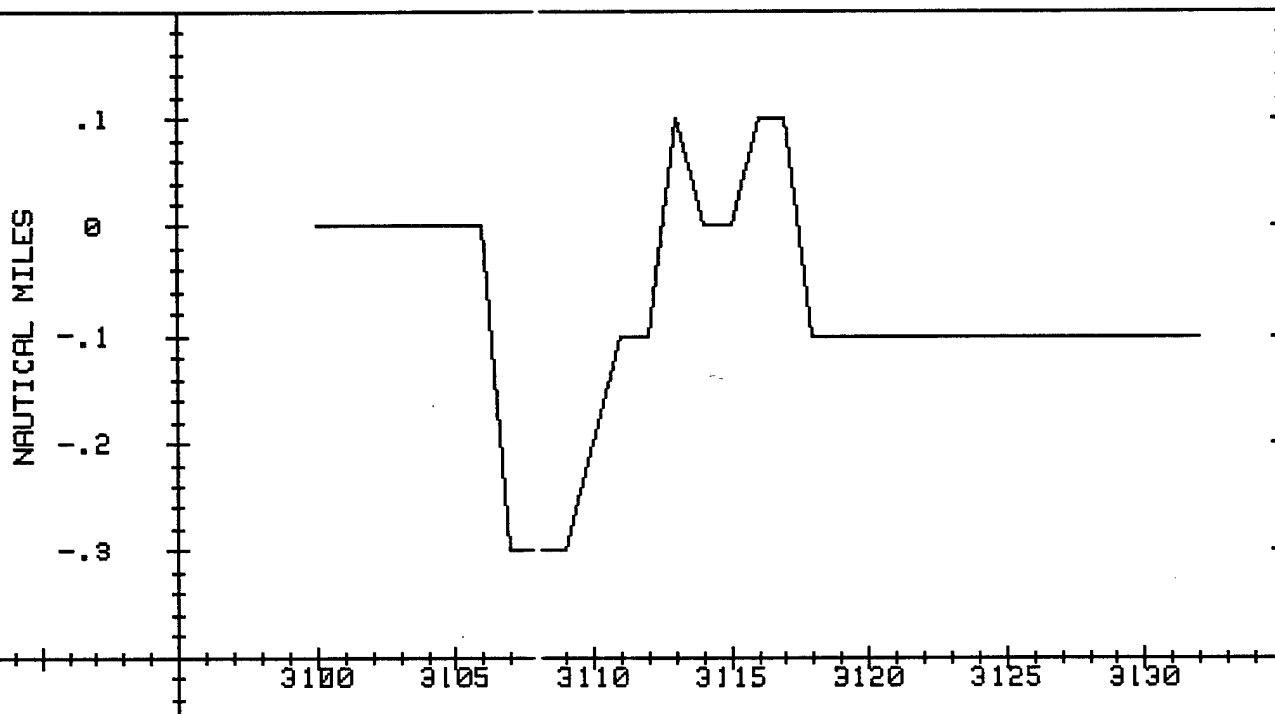
DATE: June 27, 1995 PASS 23



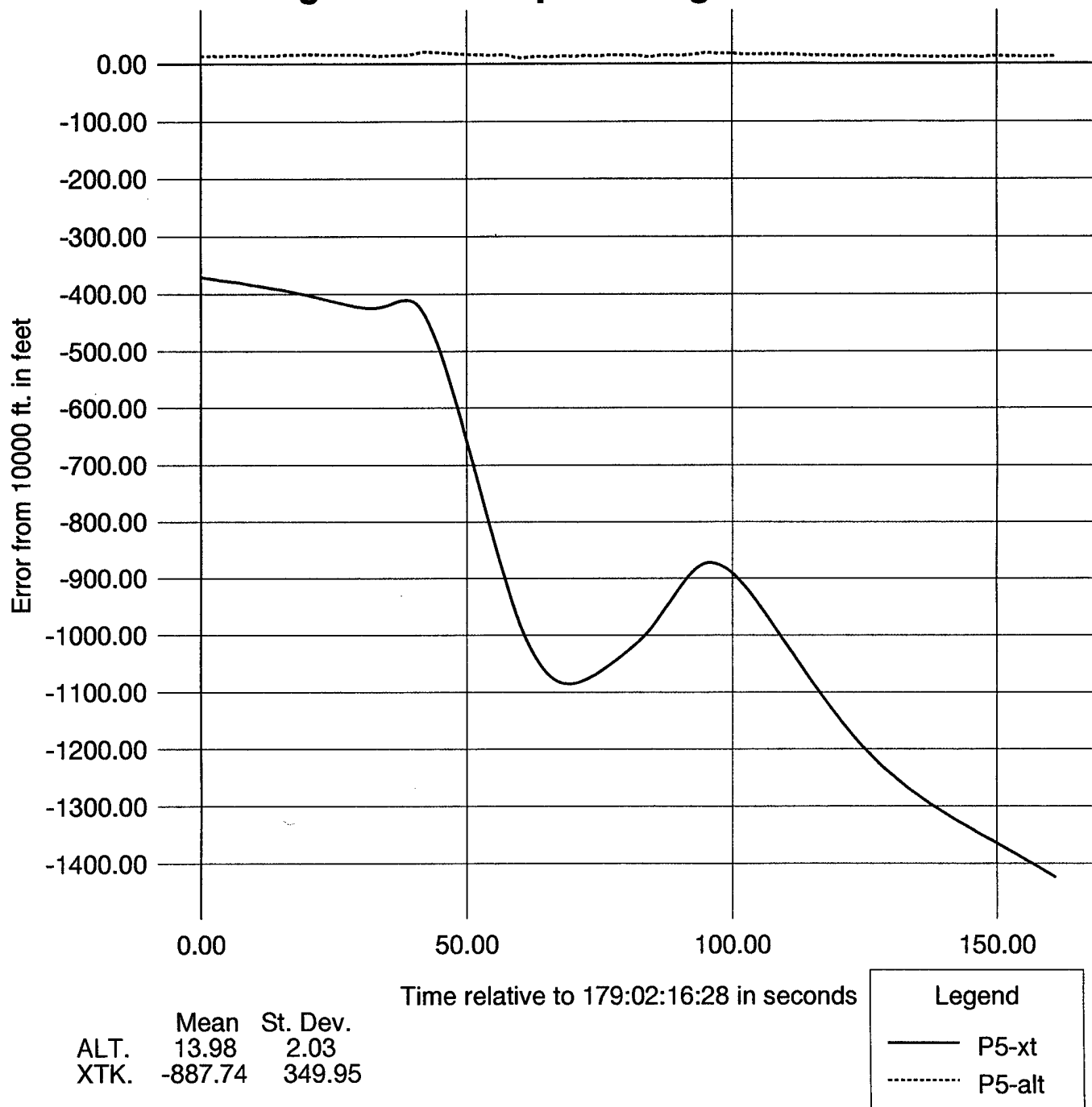
INS CROSS TRACK ERROR

MEAN= -.0757576 STANDARD DEVIATION= .0985664

DATE: June 27, 1995 PASS 23



# **Portage, ME - June 27, 1995 - Pass 23 - Xtk. and Alt. Errors** **Higher alt. and port are greater than zero**



28 Jun 1995  
Tape: 1441

Post-line Data Sheet  
Line 41  
Mission: Presque Isle DAY 3

Time: 179:02:38:13  
Pass 24  
Req.# 22

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	5940 ft s.d.=	3 Swath Ctr Ang:	15.0°	15.0°	15.0°	15.0°
Slt. rng:	20207 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	18672	18672	18672	18672
Depr Ang:	25.0°	Near Rng Dep:	18.6°	18.6°	18.6°	18.6°
Des. trk:	180.0°	Far Rng Dep:	9.8°	9.8°	9.8°	9.8°
Start Sq:	90.0°	Atten (dB):	48.0	55.0	48.0	57.0
End Sq:	90.0°	RMS Video (%FS)	25.4	14.6	18.5	19.0

#### WAYPOINTS

	Latitude	Longitude
Line_up:	N 47:01.12	W 68:24.31
Start:	N 46:49.12	W 68:24.31
End:	N 46:39.12	W 68:24.31
From:	N 63:21.83	W 68:24.31
To:	N 30:02.59	W 68:24.31

Main Target: IE  
Mocomp Point:  
Lat: N 46:44.12  
Long: W 68:28.98  
Tgt Trk: 0.0 Tgt Vel: 0.0  
Alt: 770.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel: 1  
Resolution: N/A  
Swath width: Single  
RMS Time Constant: 2^7  
Position Reference: ON  
Atten. Tracking: OFF  
Range Gate Delta: 0.0 ft  
Azimuth Presum Rate: Presum6  
TX Chirp Filename: CTLAU2B

Filter damping is Hi -> 10 sec  
PRF Factor is FAST (262.5 kts)  
Ave Gndspd: Real -> 249.8 kts  
Mocomp Off for Chnl 1, 2, 3, 4  
GPS Vel/Pos Reference  
Adj Gnd Scene: 5000.0 ft  
Range Tracking is OFF  
Clutterlock Reference: OFF  
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -1.2 fps (s.d.= 6.4)  
Ave Fil Vel -> .6 fps (s.d.= 6.0)

NML XMIT PWR	ANT BIAS
X: -70.0	Elevation: 0.0°
L: -70.0	Azimuth: 0.0°
C: -70.0	Pitch: 0.0°
P: 40.1	

Tape Footage	Drive no.
Starting: 5136 ft	(1)
Ending: 6402 ft	(1)

Vel Bias	CAL Atten
X: 2079.0	X: 63.8 dB
Y: 1867.0	L: 63.8 dB
Z: 17142.0	C: 63.8 dB

LINE Map Time (UCT)  
Start: 02:38:13  
End: 02:40:53

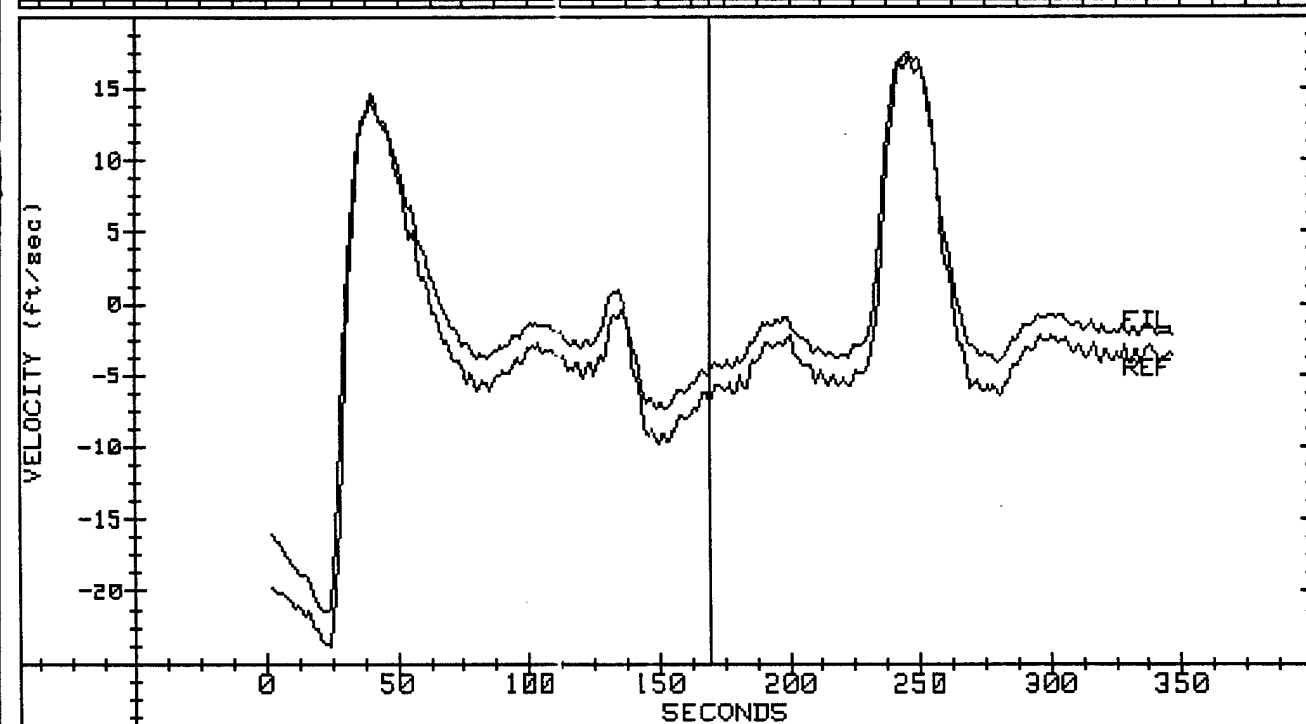
#### Mocomp Counters

Start: 1449751 00168F17h  
End: 1476593 001687F1h

CPA (UCT): 00:00:00  
Alt: 0 ft (GPS)  
Lat: N 0:00: 0  
Lon: E 0:00: 0

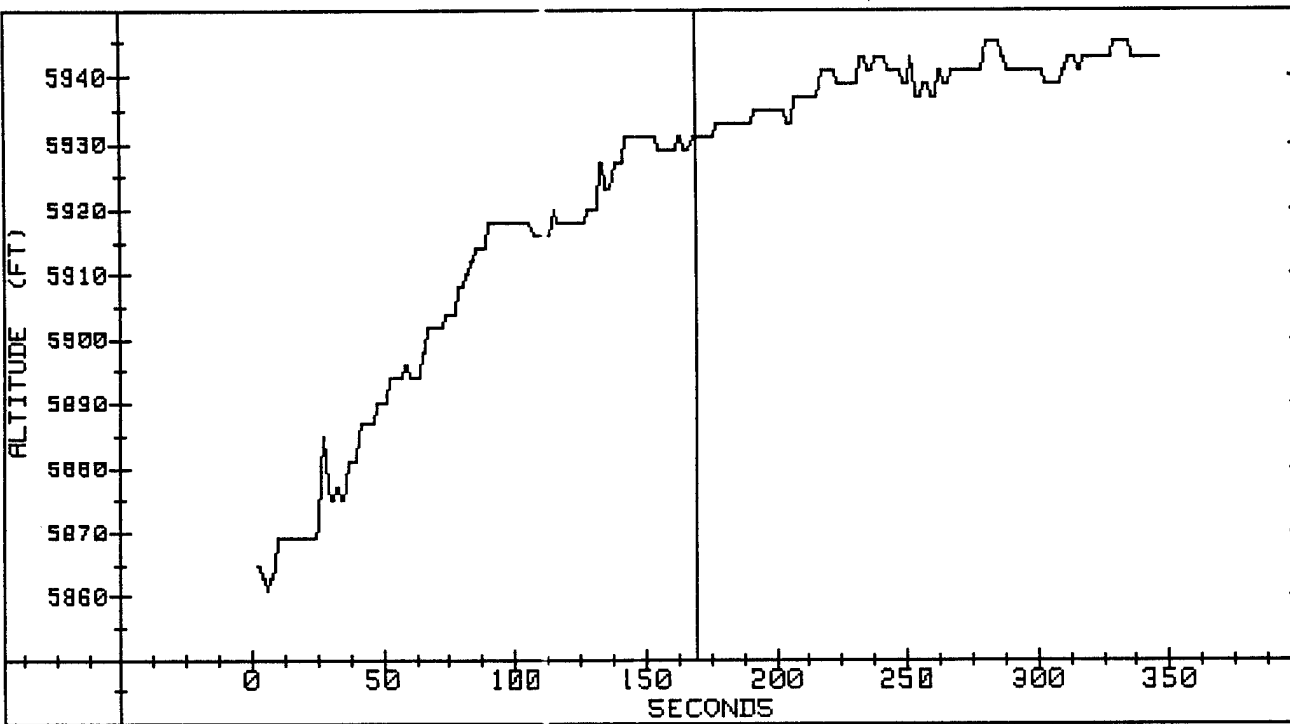
FILTERED vs. REF. VELOCITY  
DAY 179 TIME 2:35 PASS 24

INS  
LORAN  
GPS



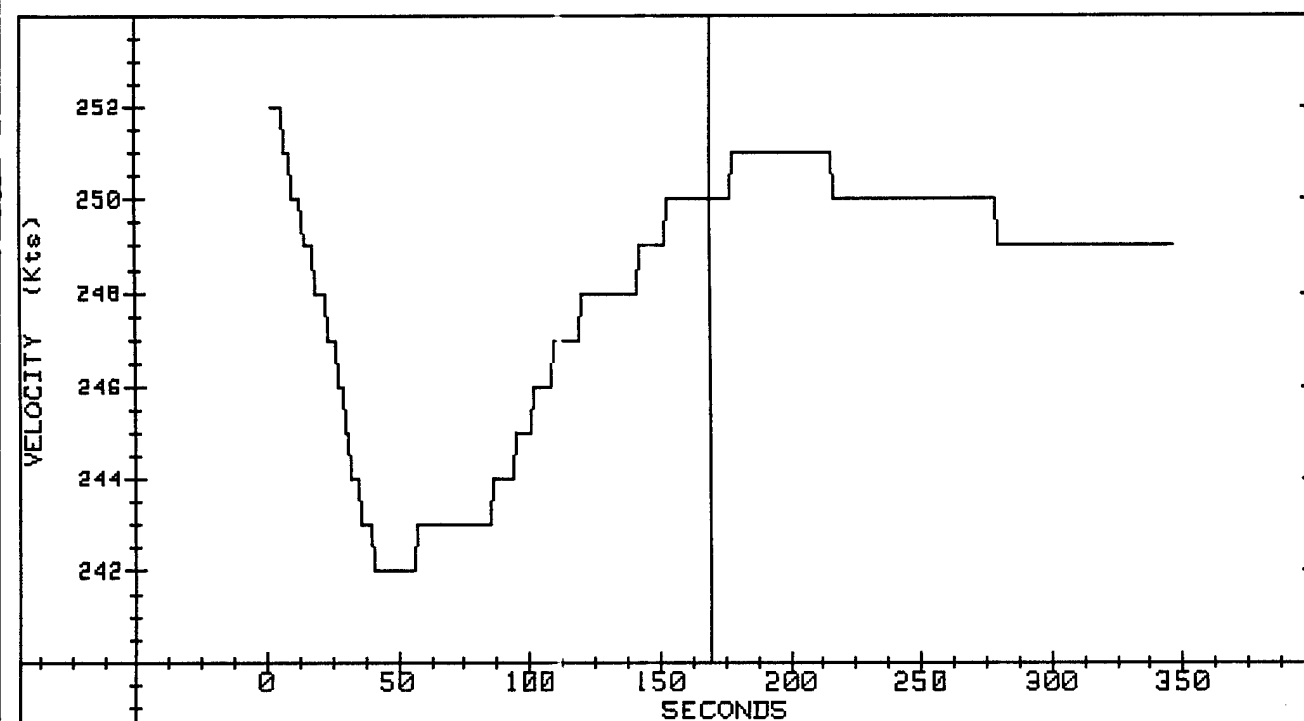
# BARO ALTITUDE

DAY 179 TIME 2:35 PASS 24 m= 5940, sd= 3.1172



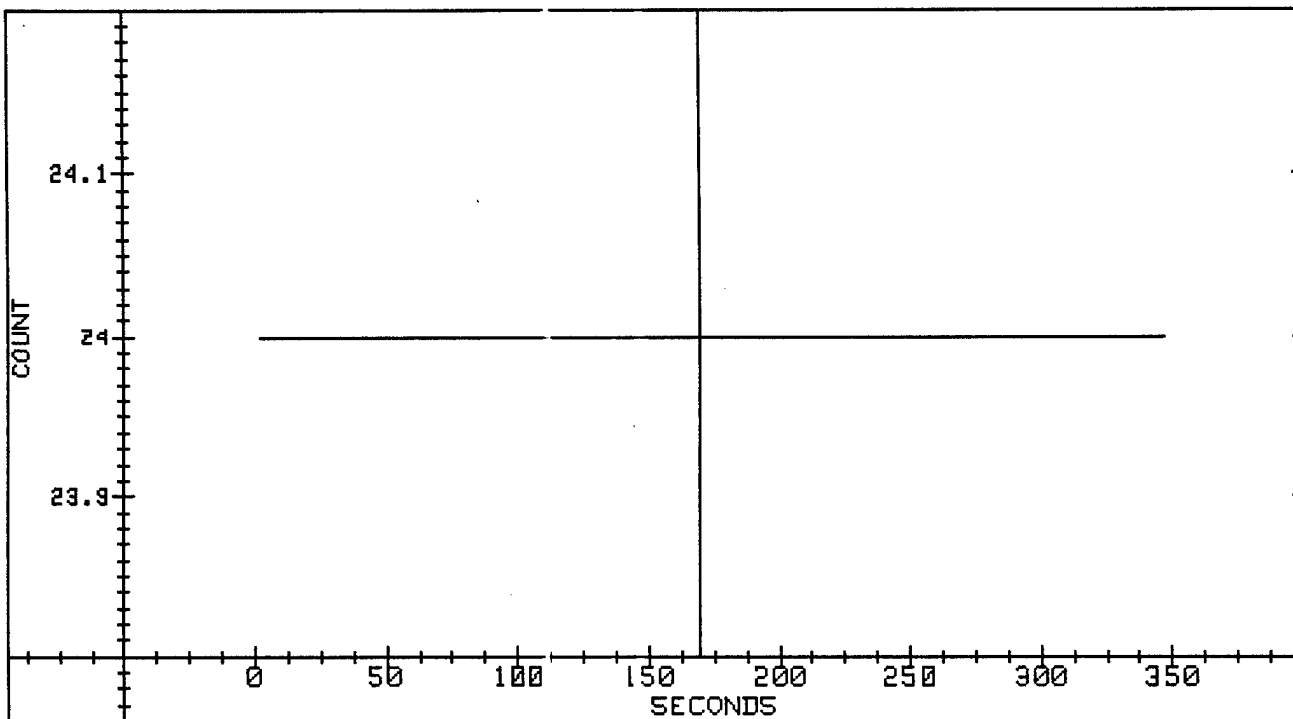
## INS GROUND SPEED

DAY 179 TIME 2:35 PASS 24 m= 249.0, sd= .743632



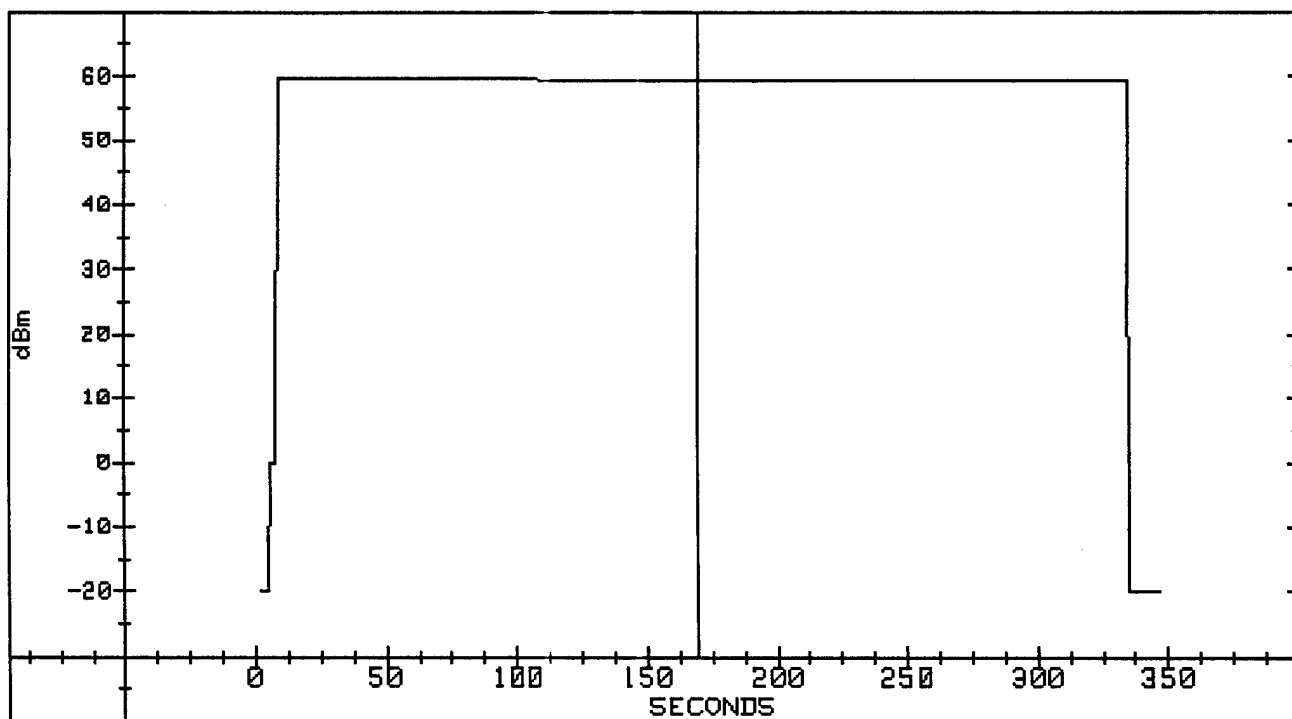
# PASS NUMBER

DAY 179 TIME 2:35 PASS 24 m= 24, sd= 0

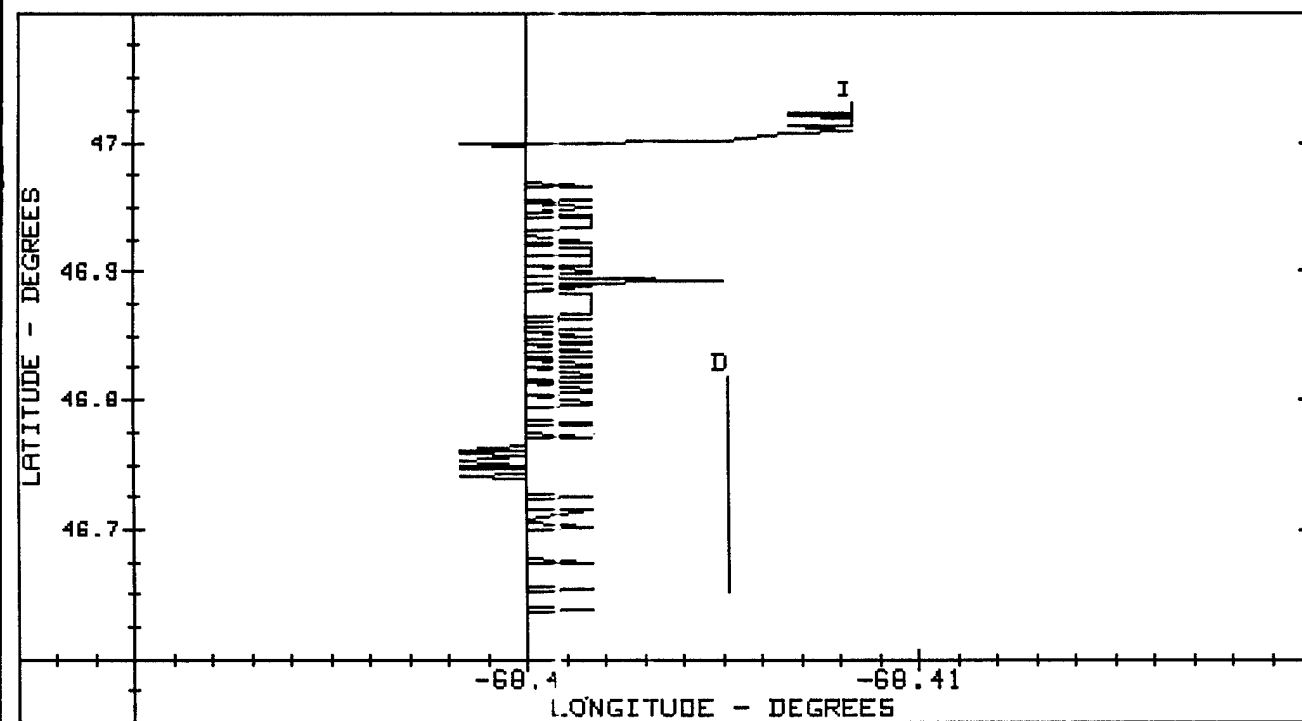


P Band Power

DRY 179 TIME 2:35 PASS 24 m= 52.91, sd= 21.6074

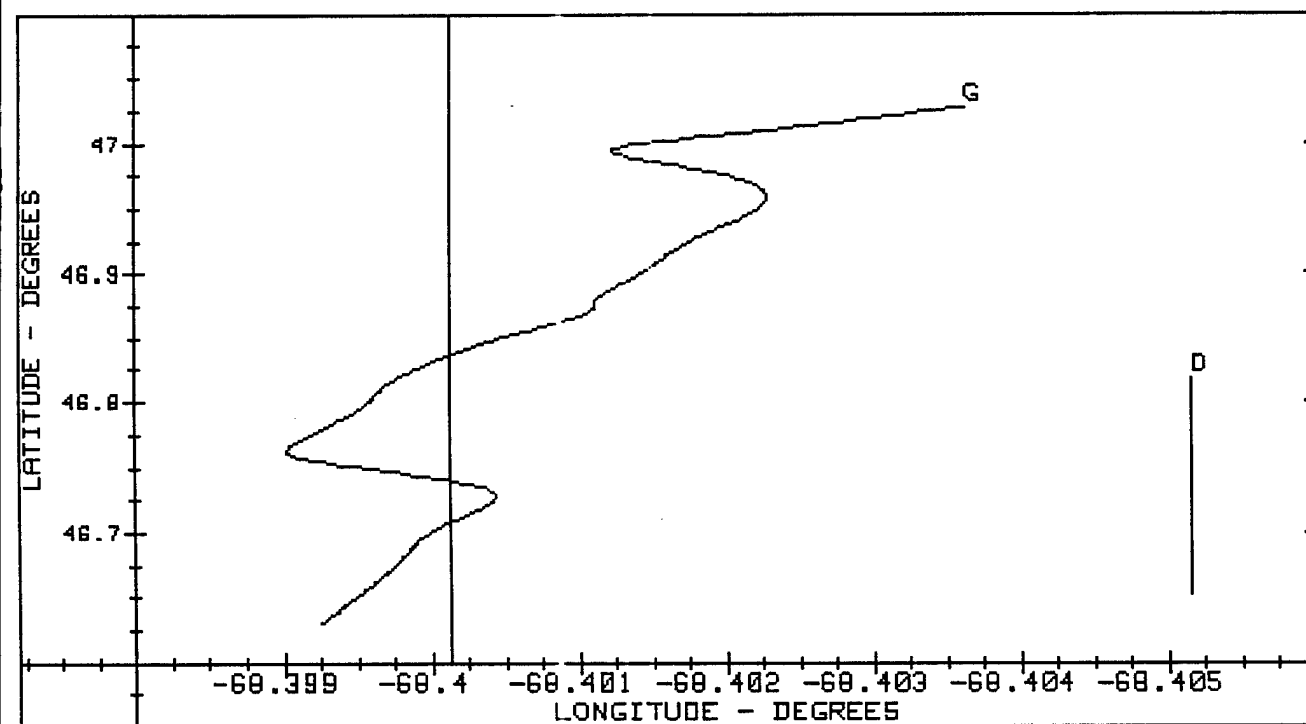


INS AIRCRAFT POSITION  
DAY 179 TIME 2:35 PASS 24



GPS AIRCRAFT POSITION

DAY 179 TIME 2:35 PASS 24



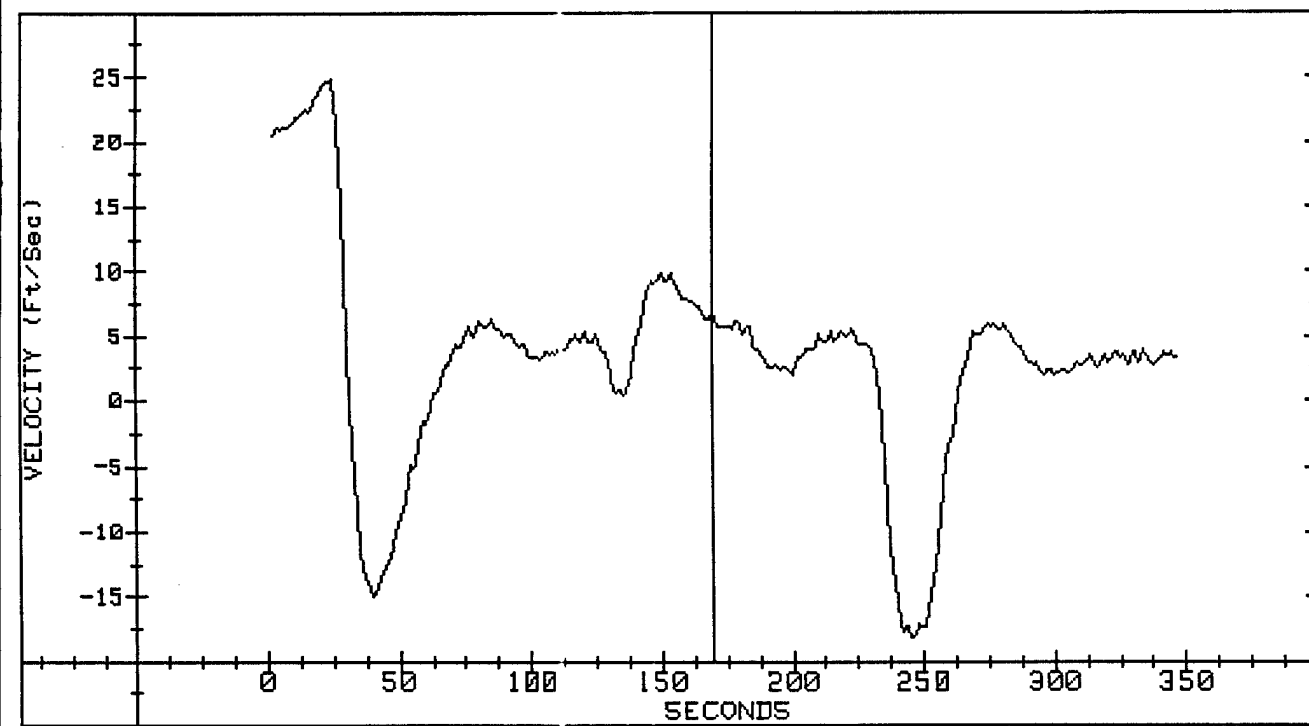
GPS V<sub>e</sub>

DRY 179

TIME 2:35

PASS 24

m= .7704, sd= 6.64346



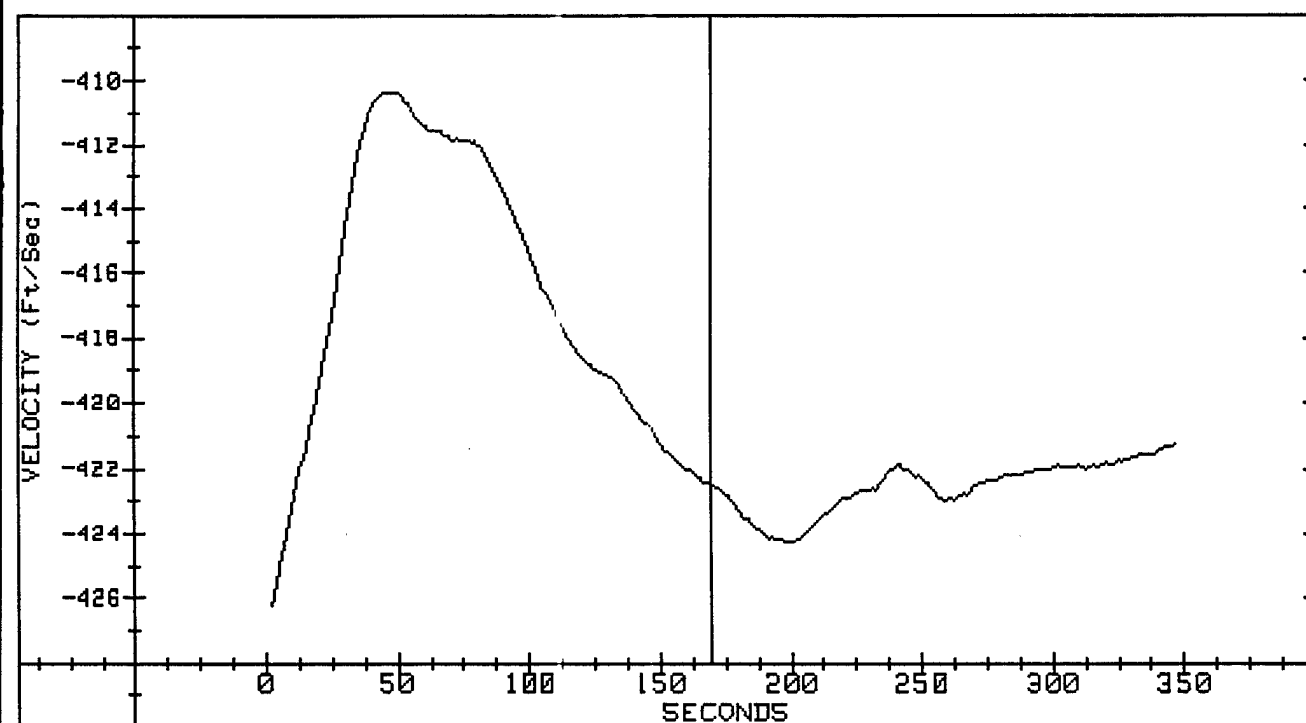
GPS Vn

DAY 179

TIME 2:35

PASS 24

m= -422.5, sd= .796029



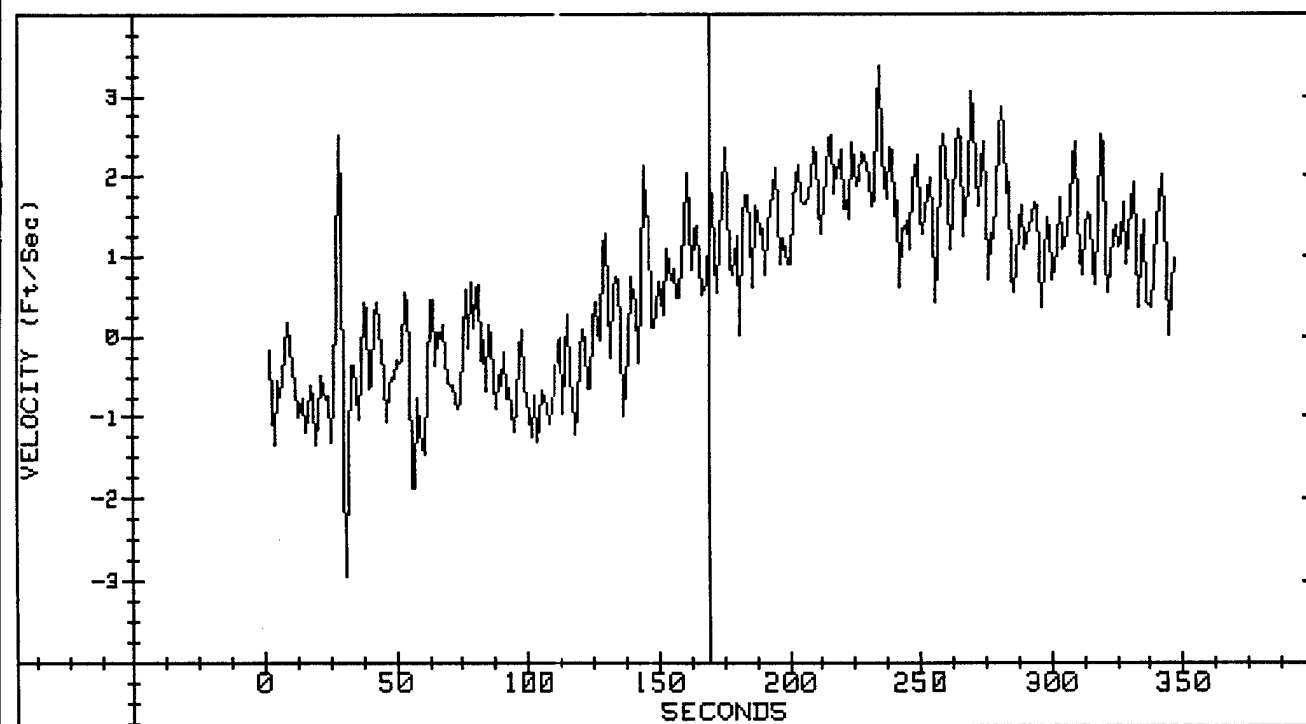
GPS Vv

DRY 179

TIME 2:35

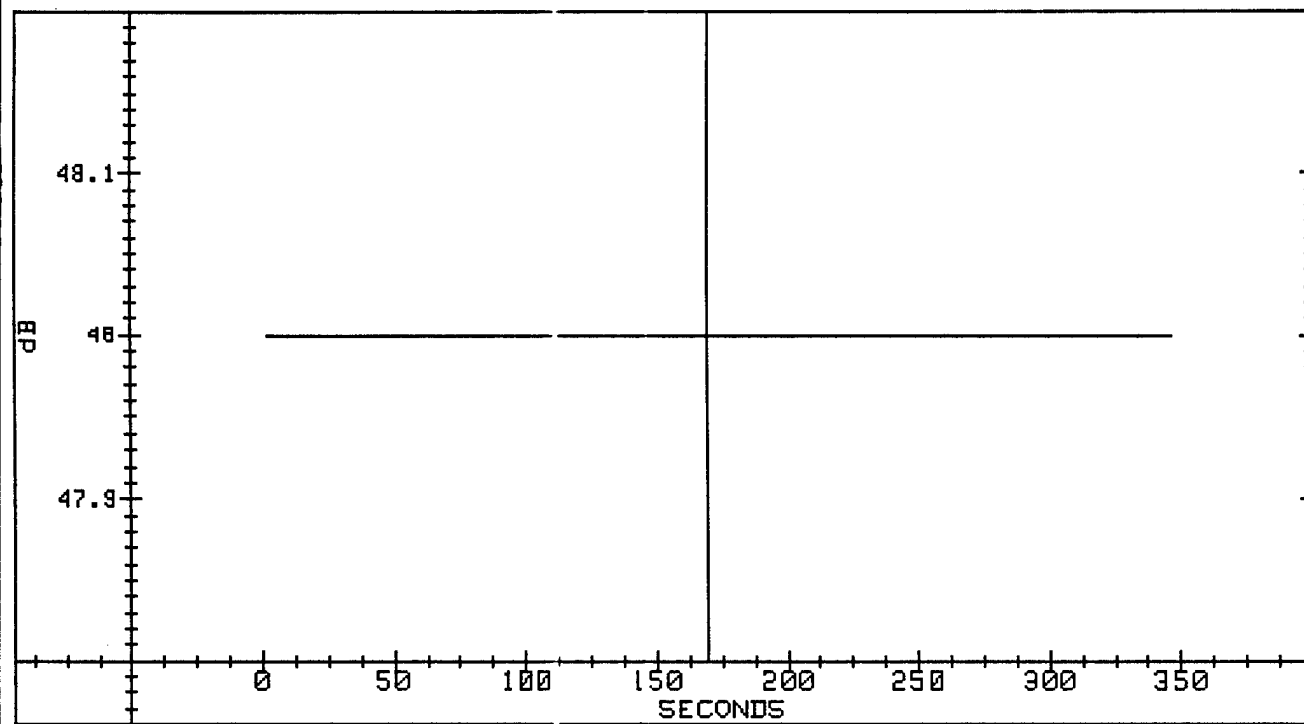
PASS 24

m= 1.575, sd= .607315



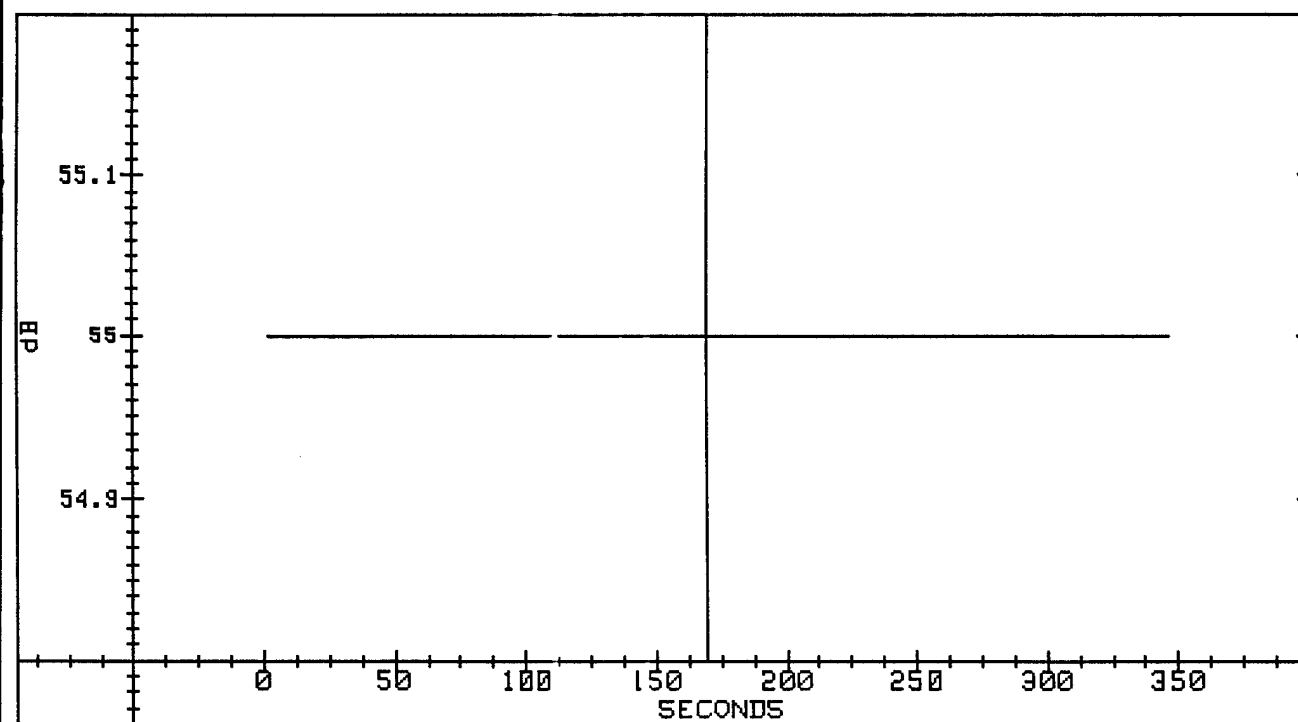
Ch1 RES Attenuation

DAY 179 TIME 2:35 PASS 24 m= 48, sd= 0



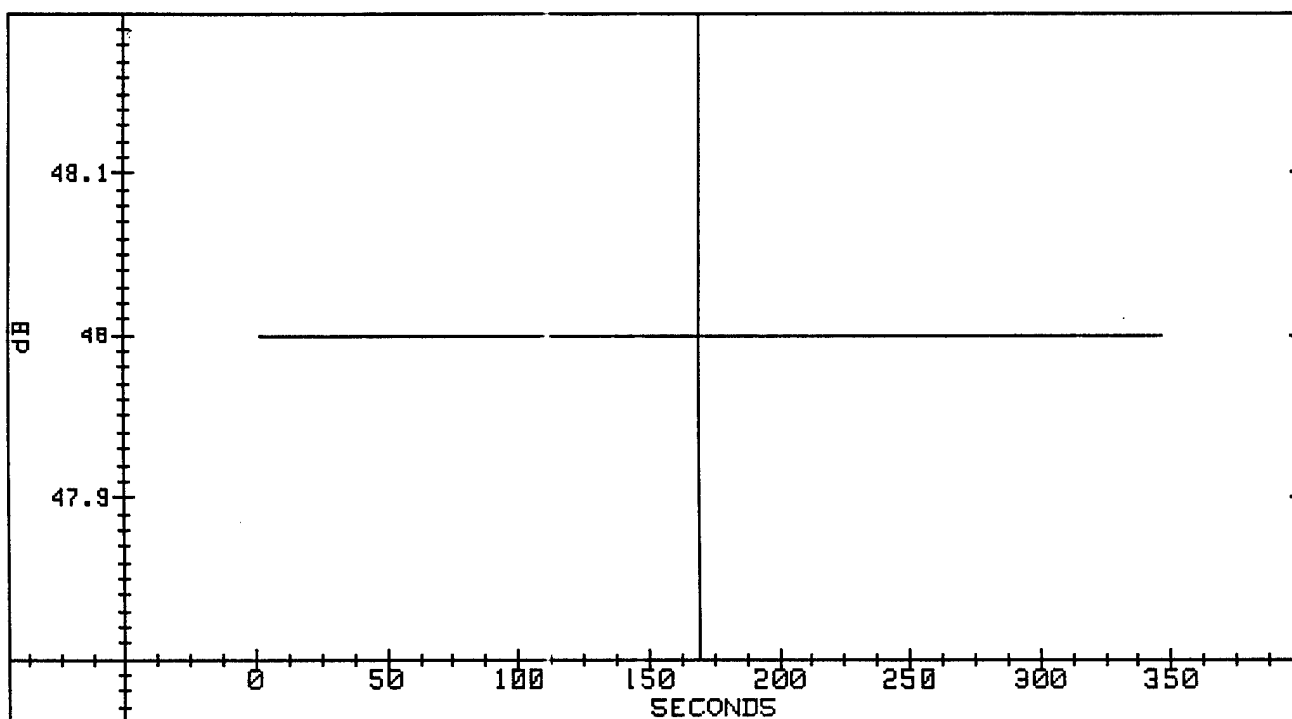
Ch2 RES Attenuation

DAY 179 TIME 2:35 PASS 24 m= 55, sd= 0



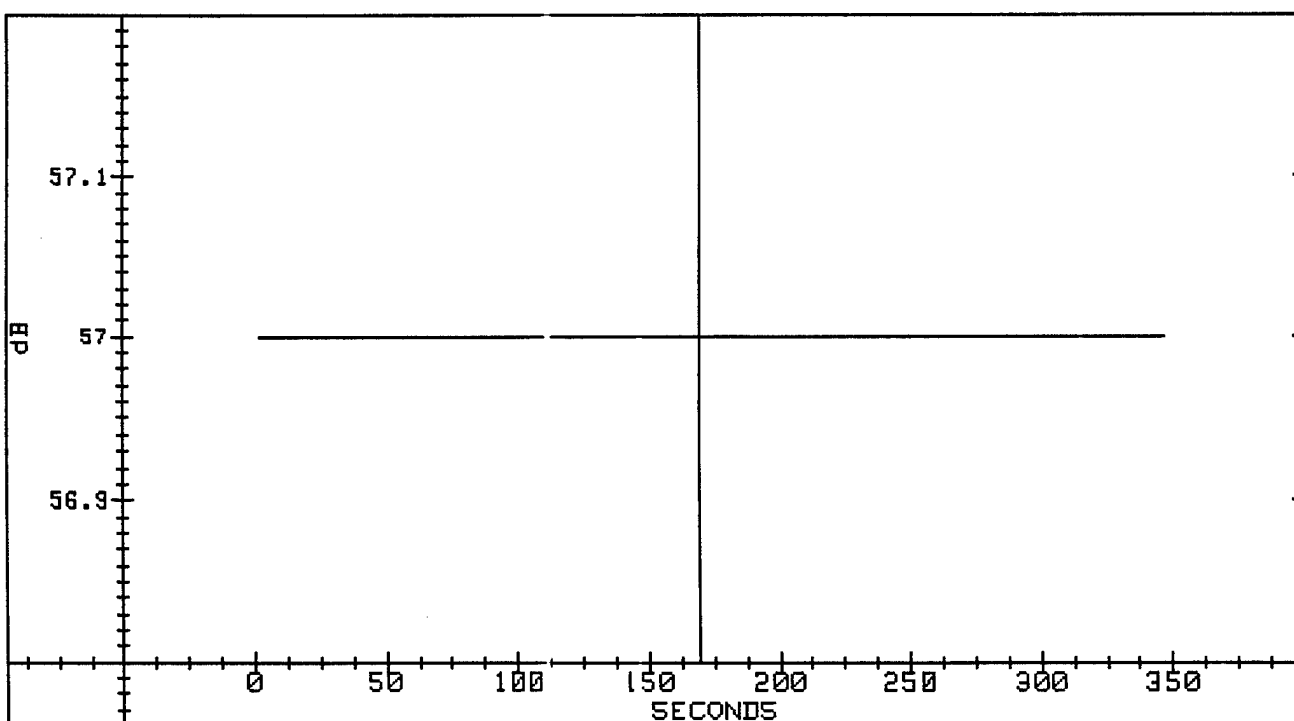
Ch3 RES Attenuation

DAY 178 TIME 2:35 PASS 24 m= 48, sd= 0



Ch4 RES Attenuation

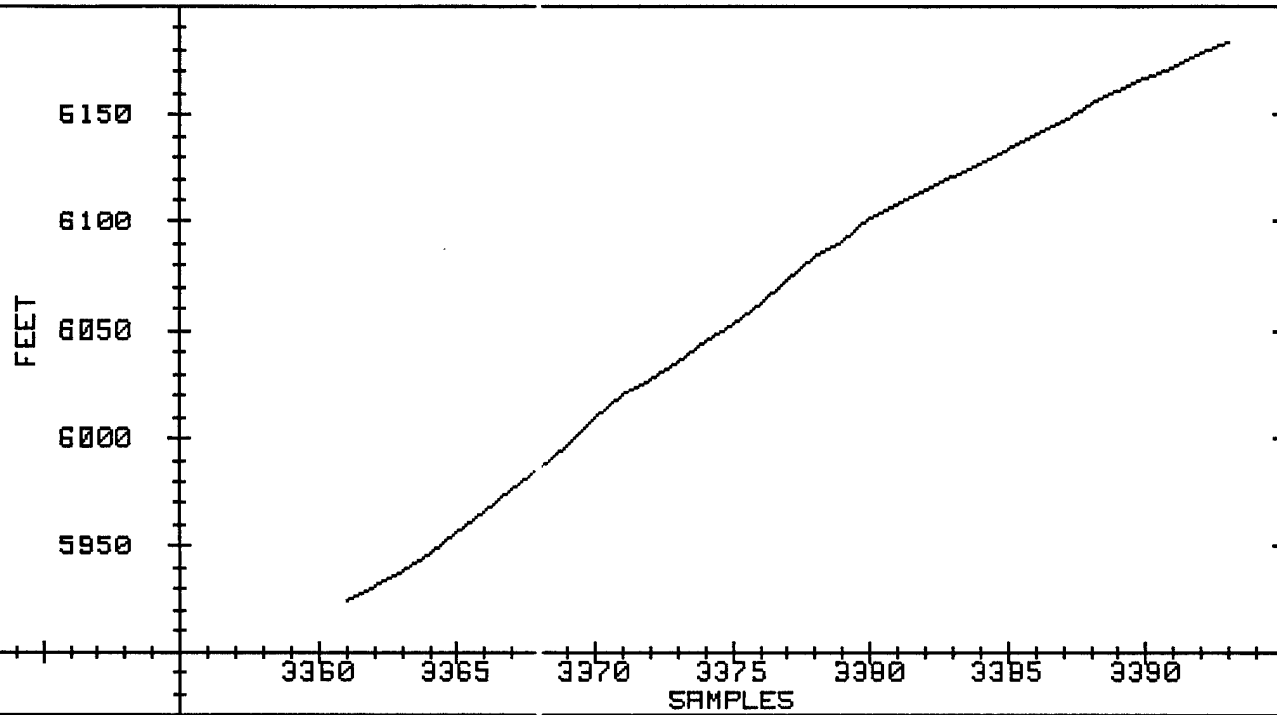
DAY 179 TIME 2:35 PASS 24 m= 57. sd= 0



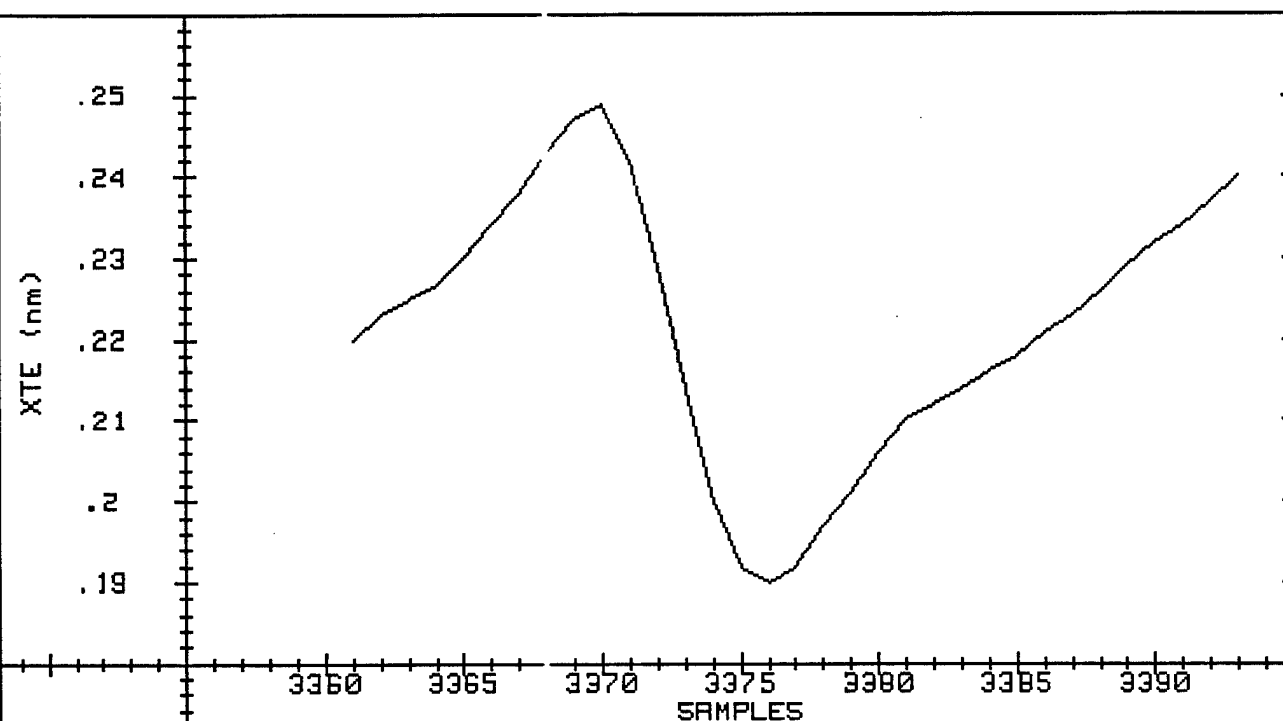
## GPS ALTITUDE

MEAN= 6054.64 STANDARD DEVIATION= 80.2465

DATE: June 27, 1995 PASS 24

OFF  
ON  
BAR

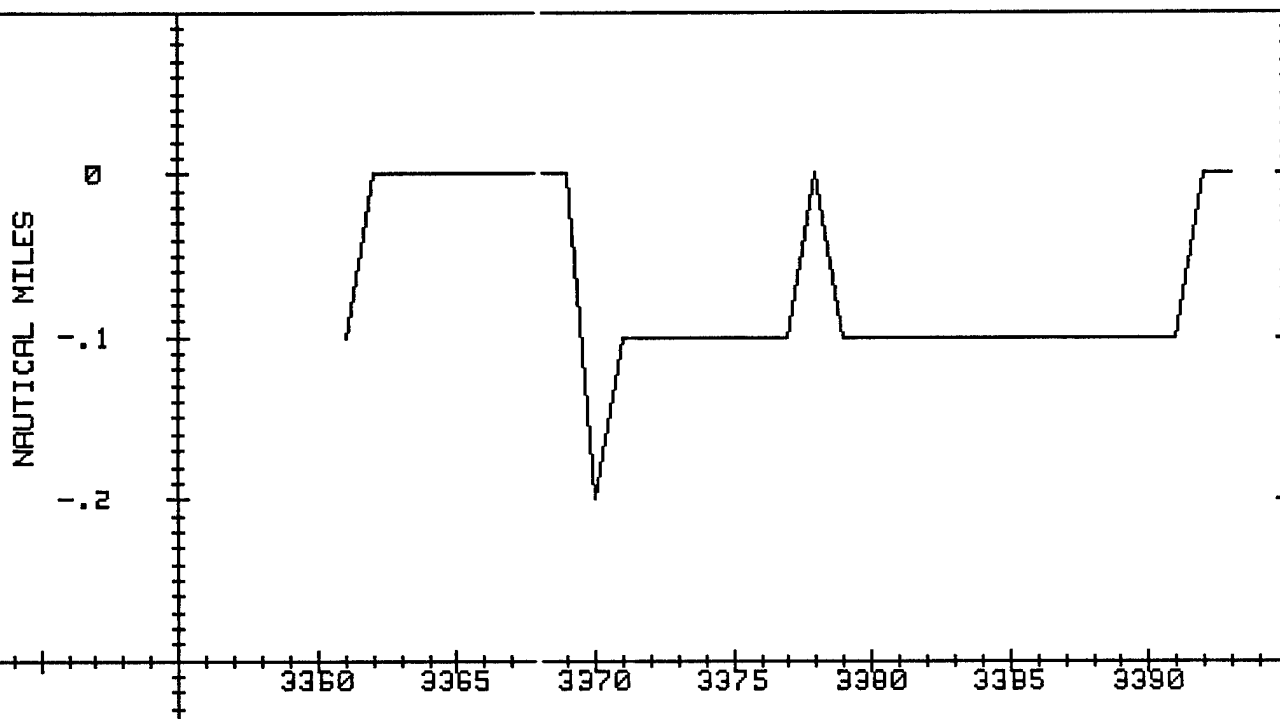
GPS Cross Track Error  
MEAN= .221545    STANDARD DEVIATION= .0161941  
DATE: June 27, 1995    PASS 24



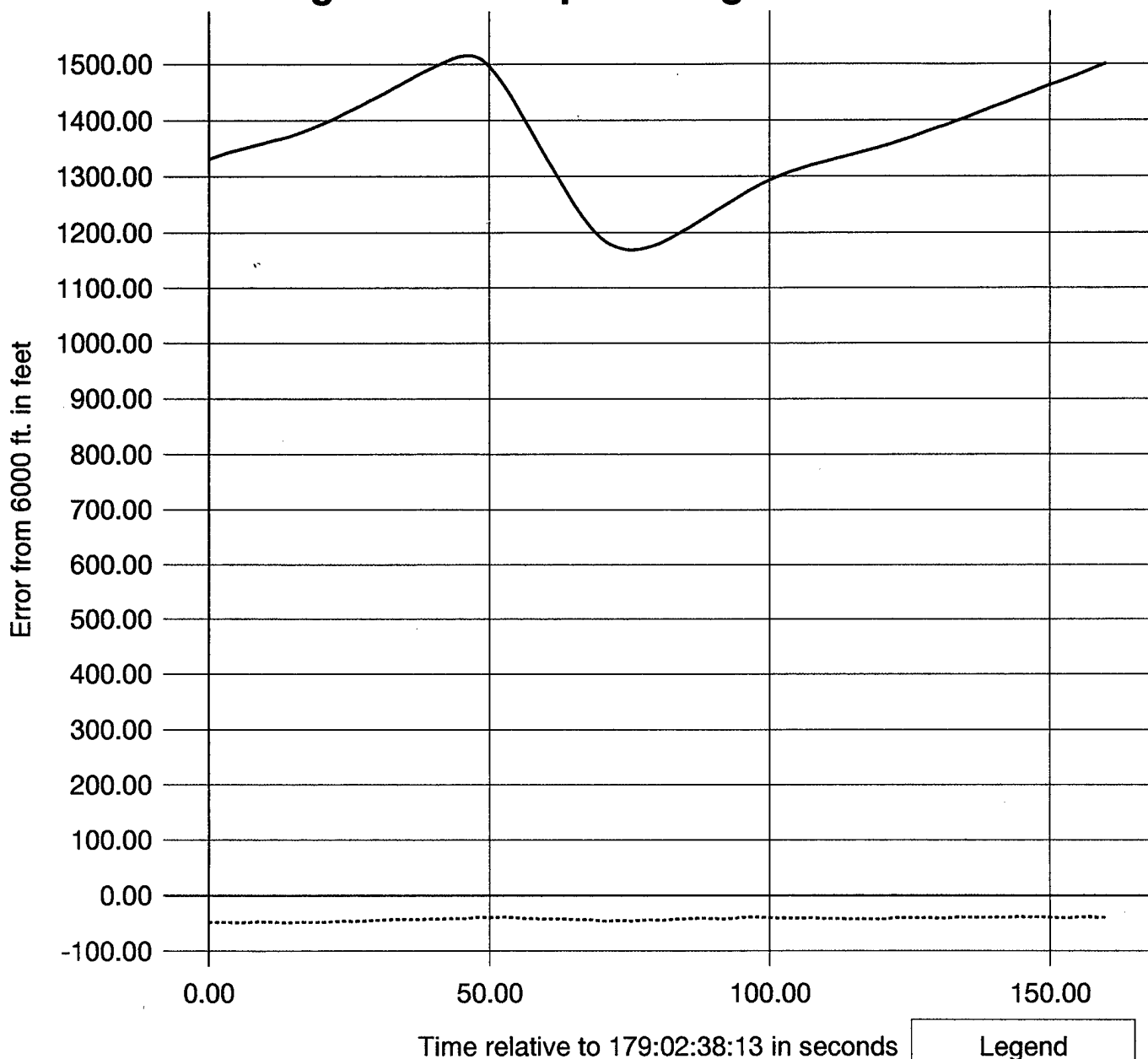
INS CROSS TRACK ERROR

MEAN- -.069697 STANDARD DEVIATION- .0521353

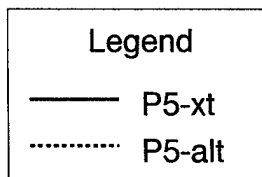
DATE: June 27, 1995 PASS 24



# Portage, ME - June 27, 1995 - Pass 24 - Xtk. and Alt. Errors Higher alt. and port are greater than zero



	Mean	St. Dev.
ALT.	-42.51	3.02
XTK.	1361.87	97.40



28 Jun 1995  
Tape: 1441

Post-line Data Sheet  
Line 43  
Mission: Presque Isle DAY 3

Time: 179:02:48:11  
Pass 25  
Req.# 23

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	5950 ft s.d. =	2 Swath Ctr Ang:	15.0°	15.0°	15.0°	15.0°
Slt. rng:	20207 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	18672	18672	18672	18672
Depr Ang:	25.0°	Near Rng Dep:	18.6°	18.6°	18.6°	18.6°
Des. trk:	0.0°	Far Rng Dep:	9.8°	9.8°	9.8°	9.8°
Start Sq:	90.0°	Atten (dB):	53.0	73.0	54.0	73.0
End Sq:	90.0°	RMS Video (%FS)	17.7	6.1	12.2	5.6

#### WAYPOINTS

Line_up:	N 46:27.13	W 68:33.65	Main Target:	IE
Start:	N 46:39.12	W 68:33.65	Mocomp Point:	
End:	N 46:49.12	W 68:33.65	Lat:	N 46:44.12
			Long:	W 68:28.98
From:	N 30:02.59	W 68:33.65	Tgt Trk:	0.0
To:	N 63:21.83	W 68:33.65	Tgt Vel:	0.0
			Alt:	770.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	->	10 sec
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)	
Swath width:	Single	Ave Gndspd:	Real	-> 251.7 kts
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4	
Position Reference:	ON	GPS Vel/Pos Reference		
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft	
Range Gate Delta:	0.0 ft	Range Tracking is	OFF	
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF	
TX Chirp Filename:	CTL1U2B	RX Chirp Filename:	CRL1N0A	
Ave Ref Vel	-> -0.0 fps (s.d.= .9)			
Ave Fil Vel	-> 1.5 fps (s.d.= .8)			

NML XMIT PWR	ANE BIAS	Tape Footage	Drive no.
X: -70.0	Elevation: 0.0°	Starting: 6417 ft	(1)
L: -70.0	Azimuth: 0.0°	Ending: 7650 ft	(1)
C: -70.0	Pitch: 0.0°		
P: 46.4			

Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 2079.0	X: 63.8 dB	Start: 02:48:11
Y: 1867.0	L: 63.8 dB	End: 02:50:47
Z: 17142.0	C: 63.8 dB	

#### Mocomp Counters

Start:	1501772	0016EA4Ch	CPA (UCT): 00:00:00
End:	1504441	0016F4B9h	Alt: 0 ft (GPS)
			Lat: N 0:00: 0
			Lon: E 0:00: 0

28 Jun 1995  
Tape: 1441

Post-line Data Sheet  
Line 43  
Mission: Presque Isle DAY 3

Time: 179:02:48:26  
Pass 26  
Req.# 23

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	5949 ft s.d. =	2 Swath Ctr Ang:	15.0°	15.0°	15.0°	15.0°
Slt. rng:	20207 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	18672	18672	18672	18672
Depr Ang:	25.0°	Near Rng Dep:	18.6°	18.6°	18.6°	18.6°
Des. trk:	0.0°	Far Rng Dep:	9.8°	9.8°	9.8°	9.8°
Start Sq:	90.0°	Atten (dB):	53.0	70.0	54.0	70.0
End Sq:	90.0°	RMS Video (%FS)	15.3	6.0	10.8	6.3

#### WAYPOINTS

Line up:	N 46:27.13	W 68:33.65	Main Target: IE
Start:	N 46:39.12	W 68:33.65	Mocomp Point:
End:	N 46:49.12	W 68:33.65	Lat: N 46:44.12
			Long: W 68:28.98
From:	N 30:02.59	W 68:33.65	Tgt Trk: 0.0 Tgt Vel: 0.0
To:	N 63:21.83	W 68:33.65	Alt: 770.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel: 1	Filter damping is Hi -> 10 sec
Resolution: N/A	PRF Factor is FAST (262.5 kts)
Swath width: Single	Ave Gndspd: Real -> 251.8 kts
RMS Time Constant: 2^7	Mocomp Off for Chnl 1, 2, 3, 4
Position Reference: ON	GPS Vel/Pos Reference
Atten. Tracking: OFF	Adj Gnd Scene: 5000.0 ft
Range Gate Delta: 0.0 ft	Range Tracking is OFF
Azimuth Presum Rate: Presum6	Clutterlock Reference: OFF
TX Chirp Filename: CTLAU2B	RX Chirp Filename: CRL1N0A
Ave Ref Vel -> 3.0 fps (s.d.= .9)	
Ave Fil Vel -> 4.7 fps (s.d.= .9)	

NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation: 0.0°	Starting: 6417 ft	(1)
L: -70.0	Azimuth: 0.0°	Ending: 7650 ft	(1)
C: -70.0	Pitch: 0.0°		
P: 38.5			

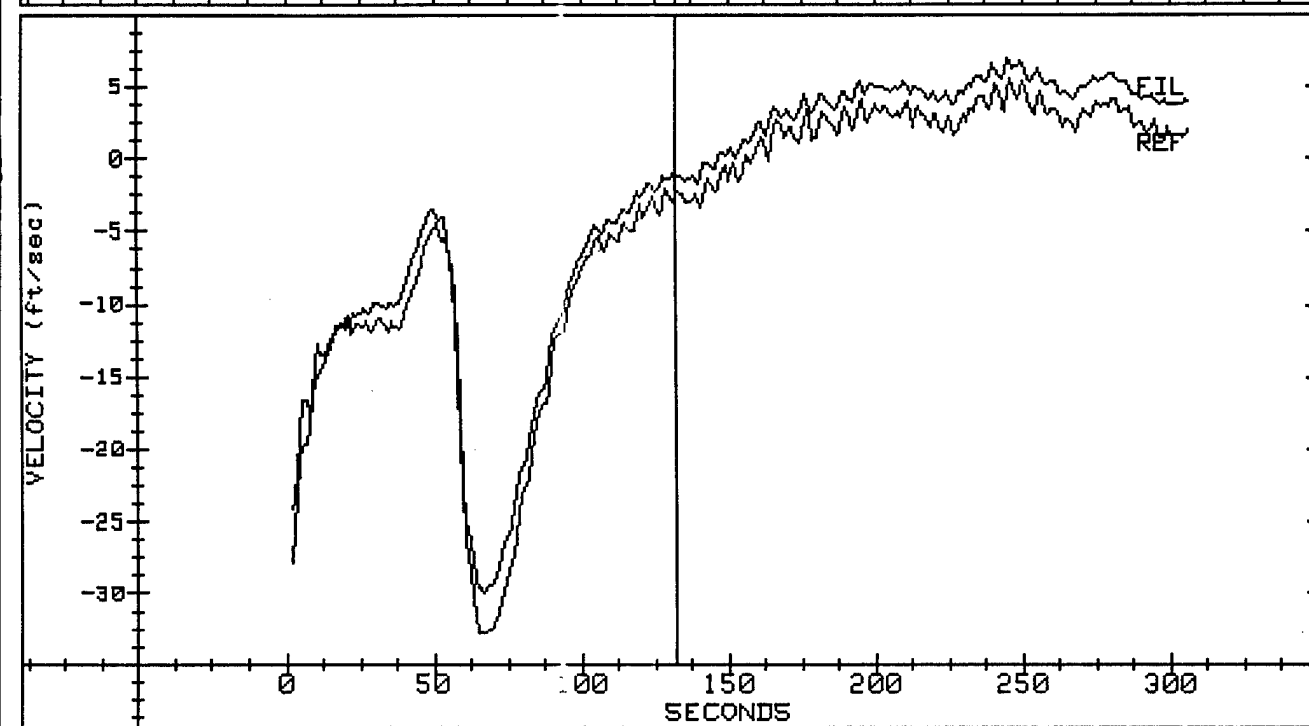
Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 2079.0	X: 63.8 dB	Start: 02:48:26
Y: 1867.0	L: 63.8 dB	End: 02:50:47
Z: 17142.0	C: 63.8 dB	

#### Mocomp Counters

Start:	1504441	0016F4B9h	CPA (UCT): 00:00:00
End:	1527940	00175084h	Alt: 0 ft (GPS)
			Lat: N 0:00: 0
			Lon: E 0:00: 0

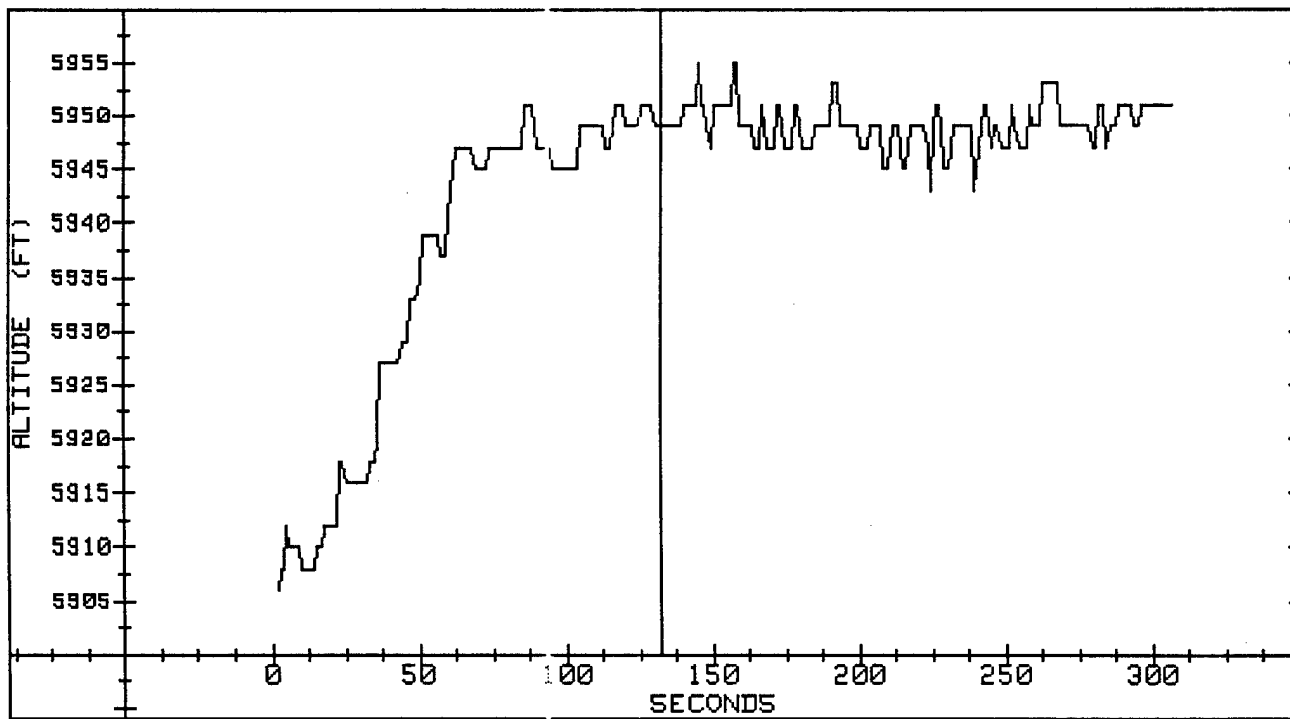
FILTERED vs. REF. VELOCITY  
DAY 179 TIME 2:45 PASS 25

ING  
LORAN  
CPS



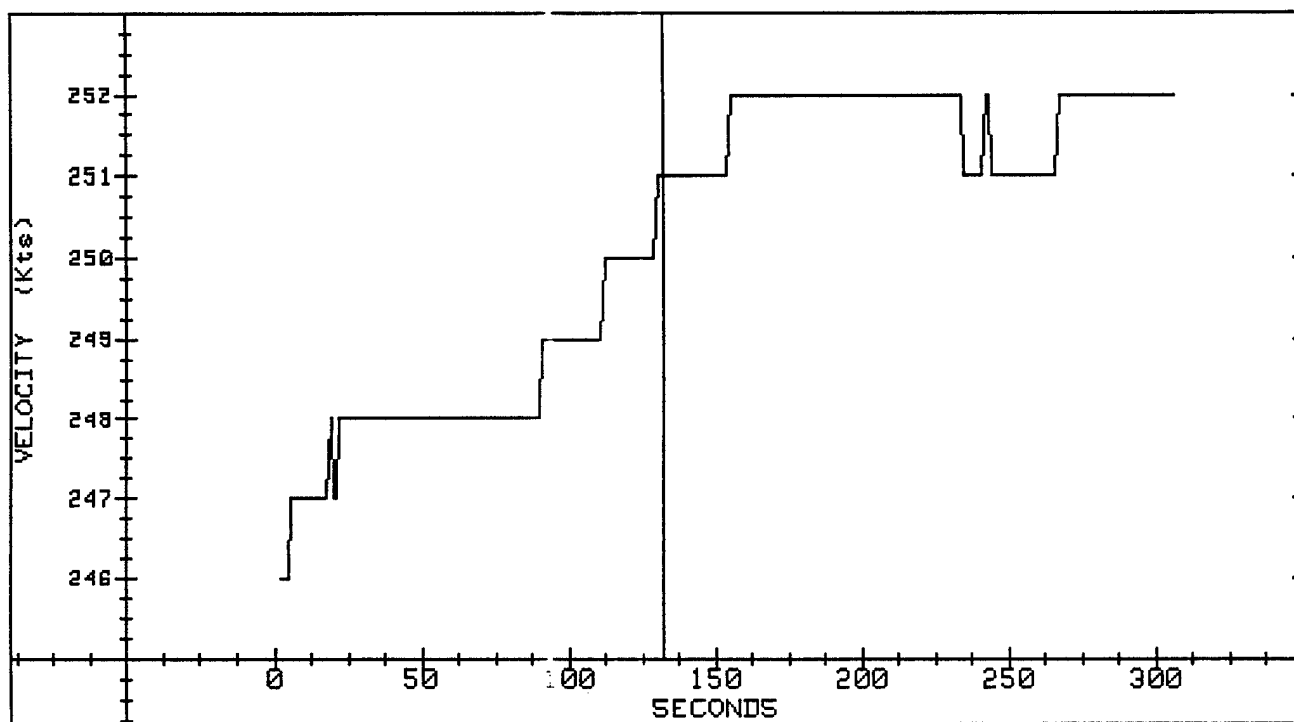
# BARO ALTITUDE

DAY 179 TIME 2:45 PASS 25 m= 5949, sd= 2.0994



## INS GROUND SPEED

DRY 179 TIME 2:45 PRSS 25 m= 251.8, sd= .416212



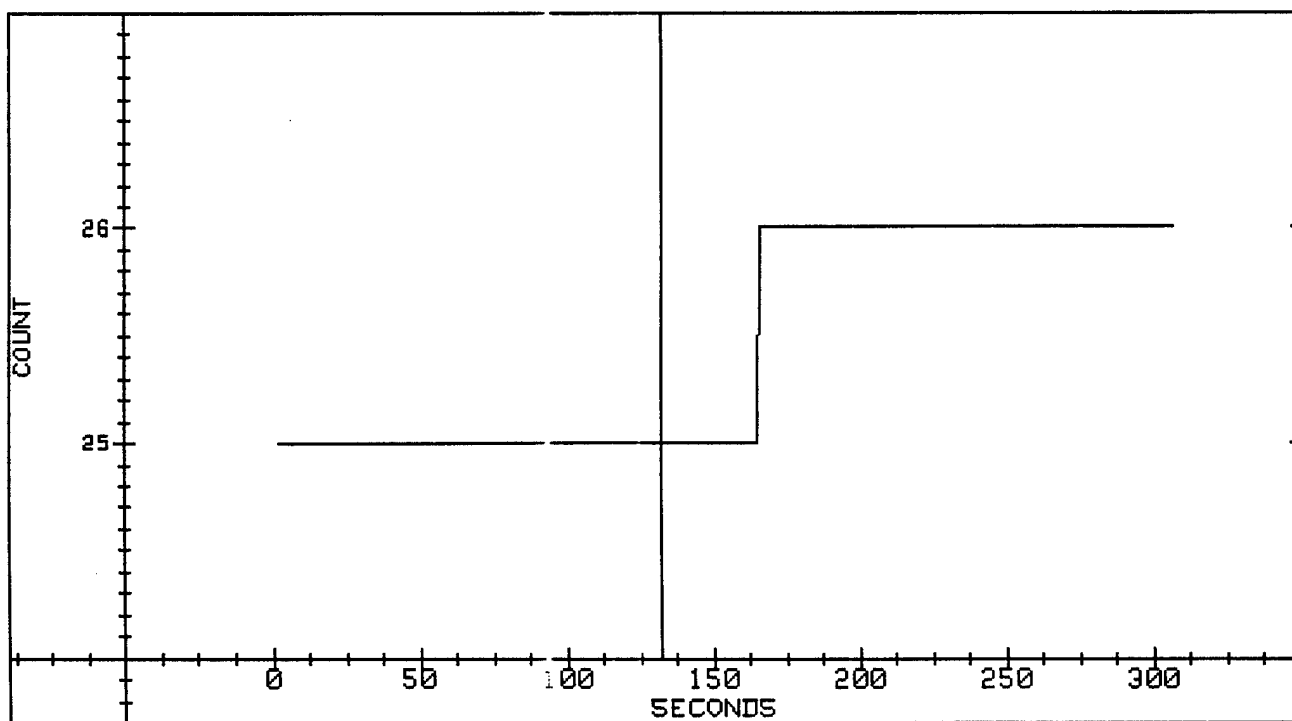
# PASS NUMBER

DAY 179

TIME 2:45

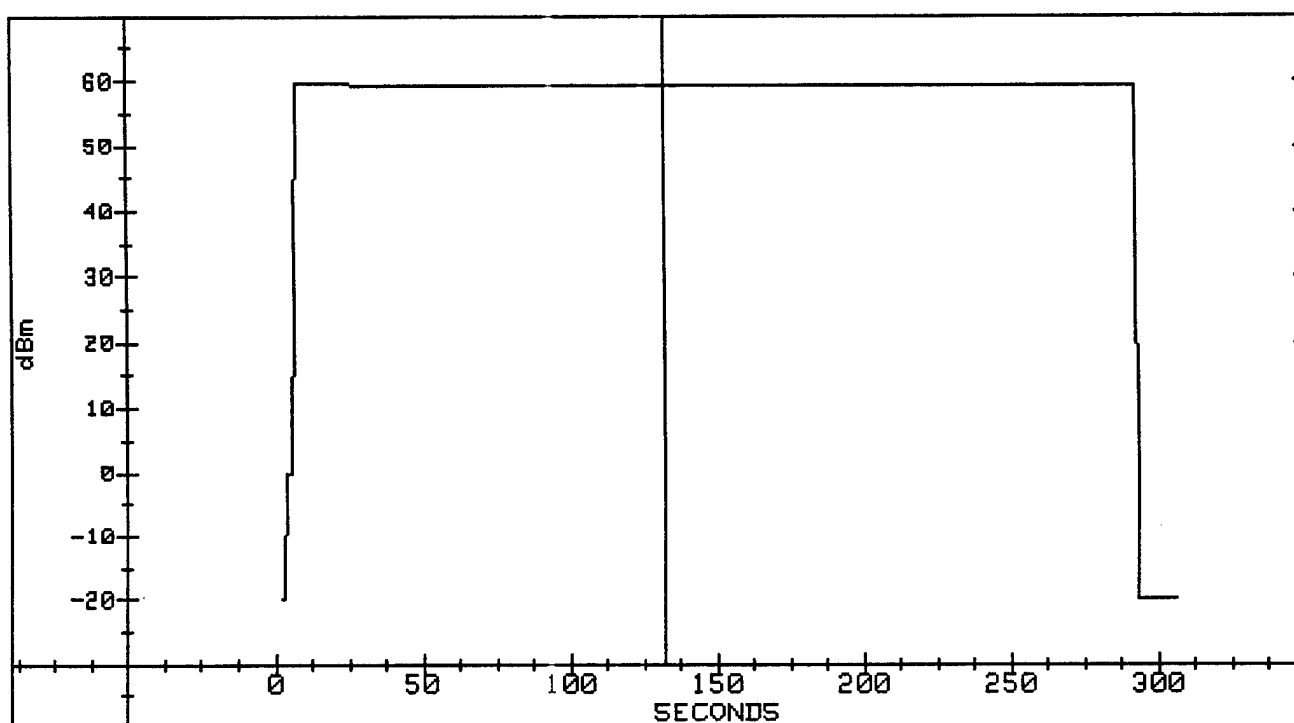
PASS 25

m= 25.9, sd= .302531



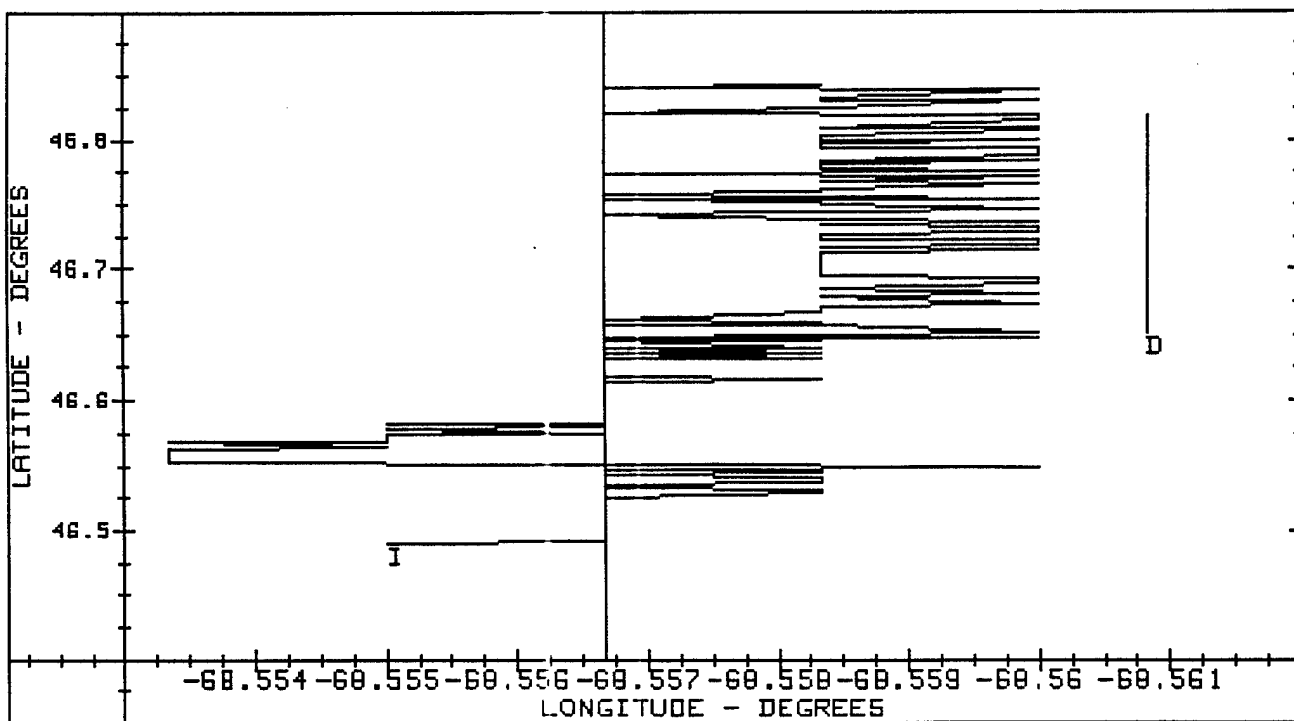
P Band Power

DAY 179 TIME 2:45 PASS 25 m= 52.1, sd= 22.5508



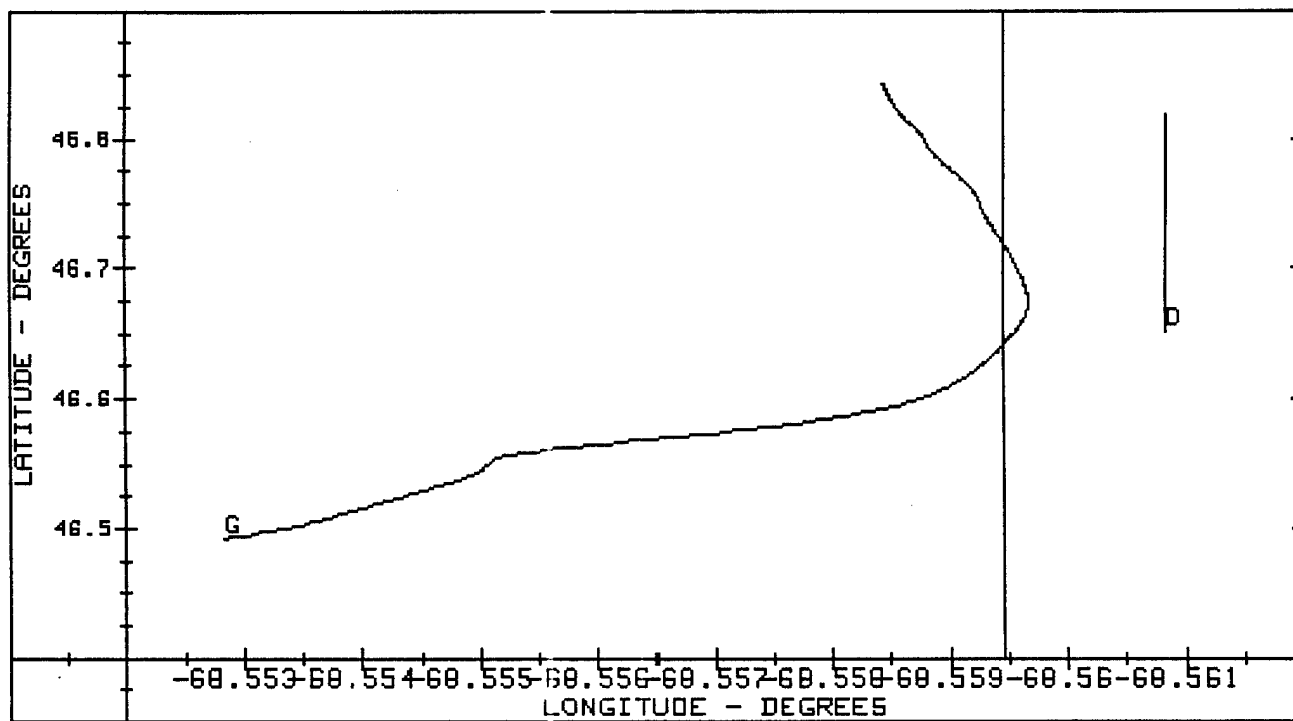
INS AIRCRAFT POSITION

DAY 179 TIME 2:45 PASS 25



GPS AIRCRAFT POSITION

DAY 179 TIME 2:45 PASS 25



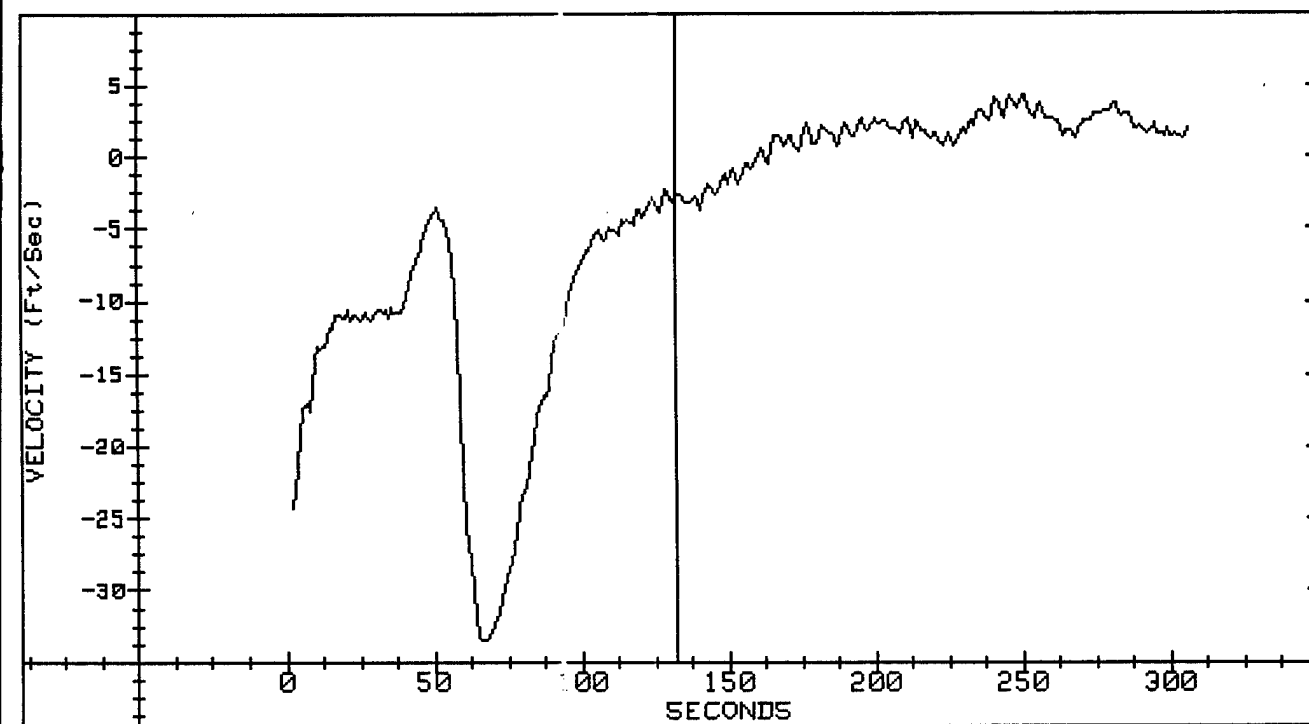
GPS V<sub>e</sub>

DAY 179

TIME 2:45

PASS 25

m= 1.926, sd= 1.1989



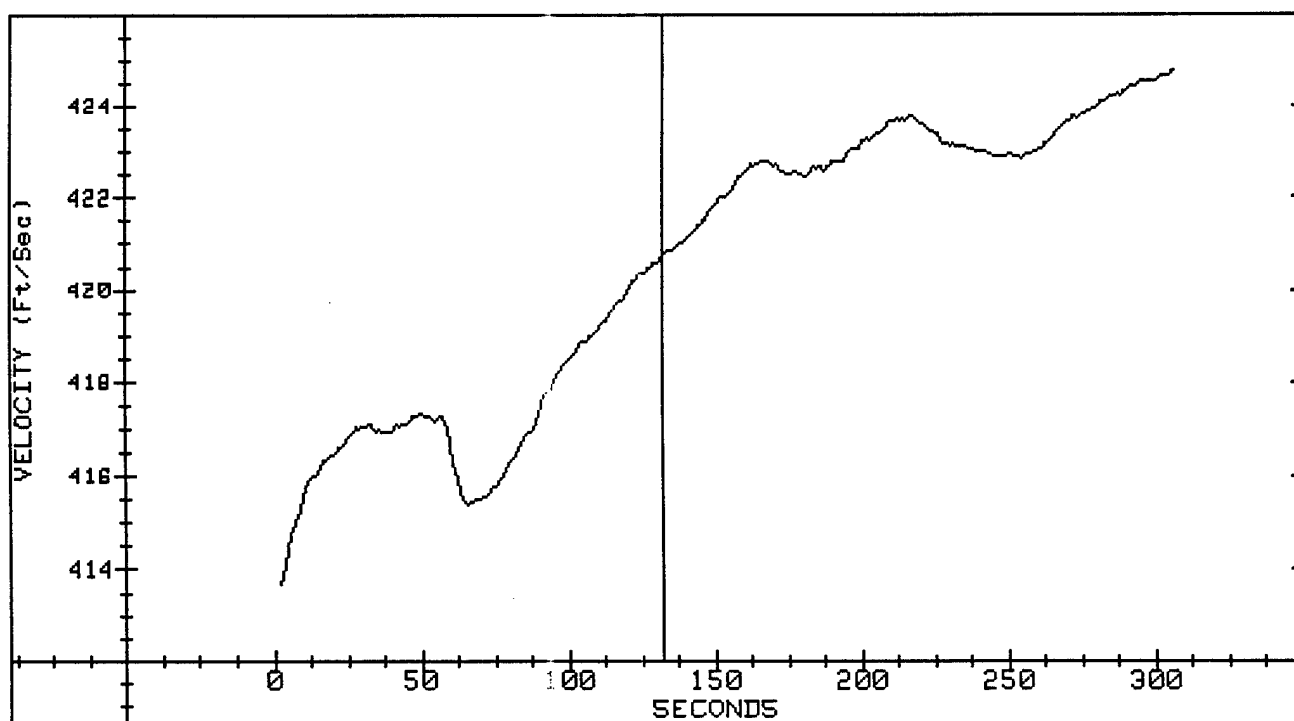
GPS Vn

DRY 179

TIME 2:45

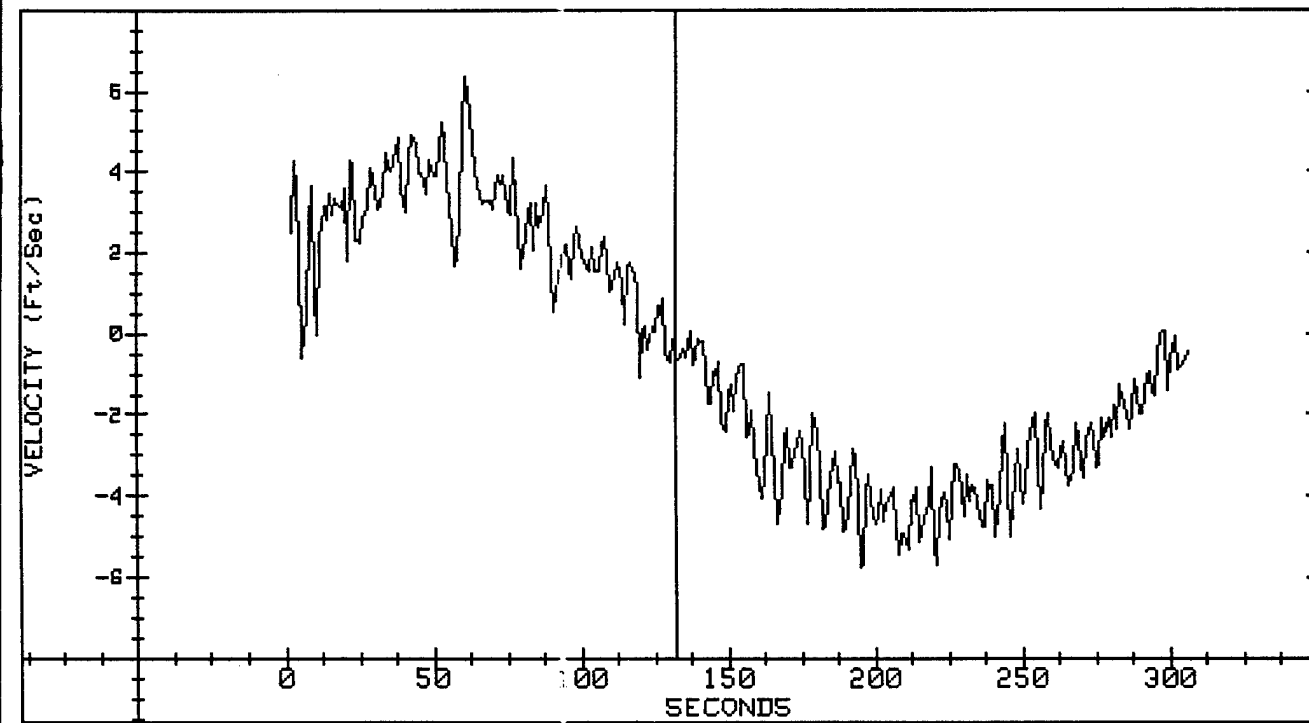
PRSS 25

m= 423.3, sd= .682148



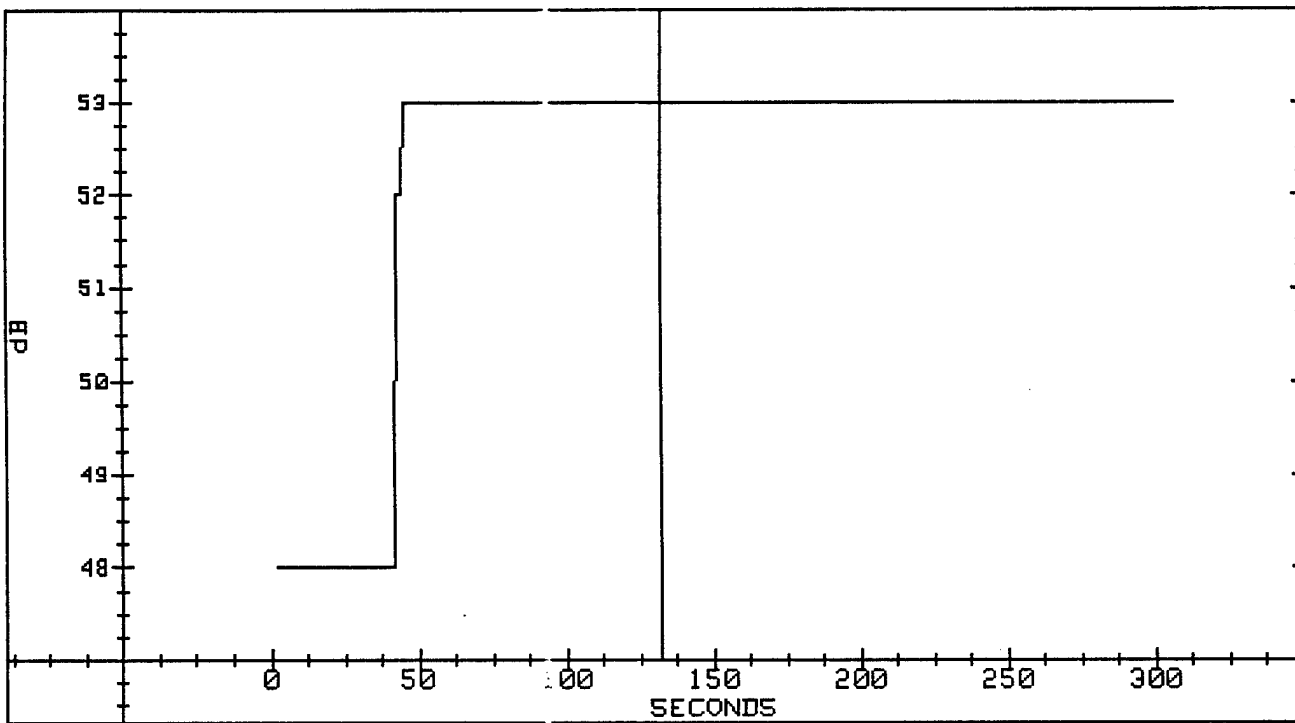
GPS Vv

DAY 179 TIME 2:45 PASS 25 m= -3.123, sd= 1.33041



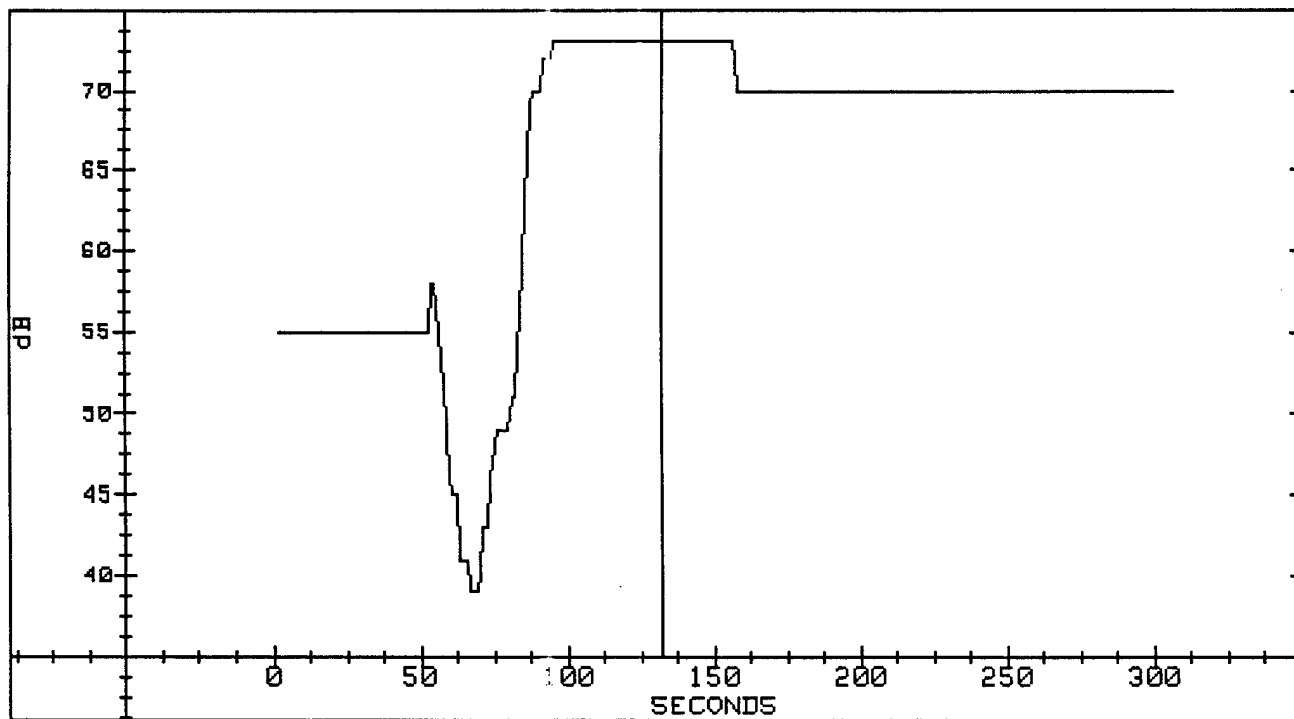
Ch1 RES Attenuation

DAY 179 TIME 2:45 PASS 25 m= 53, sd= 0



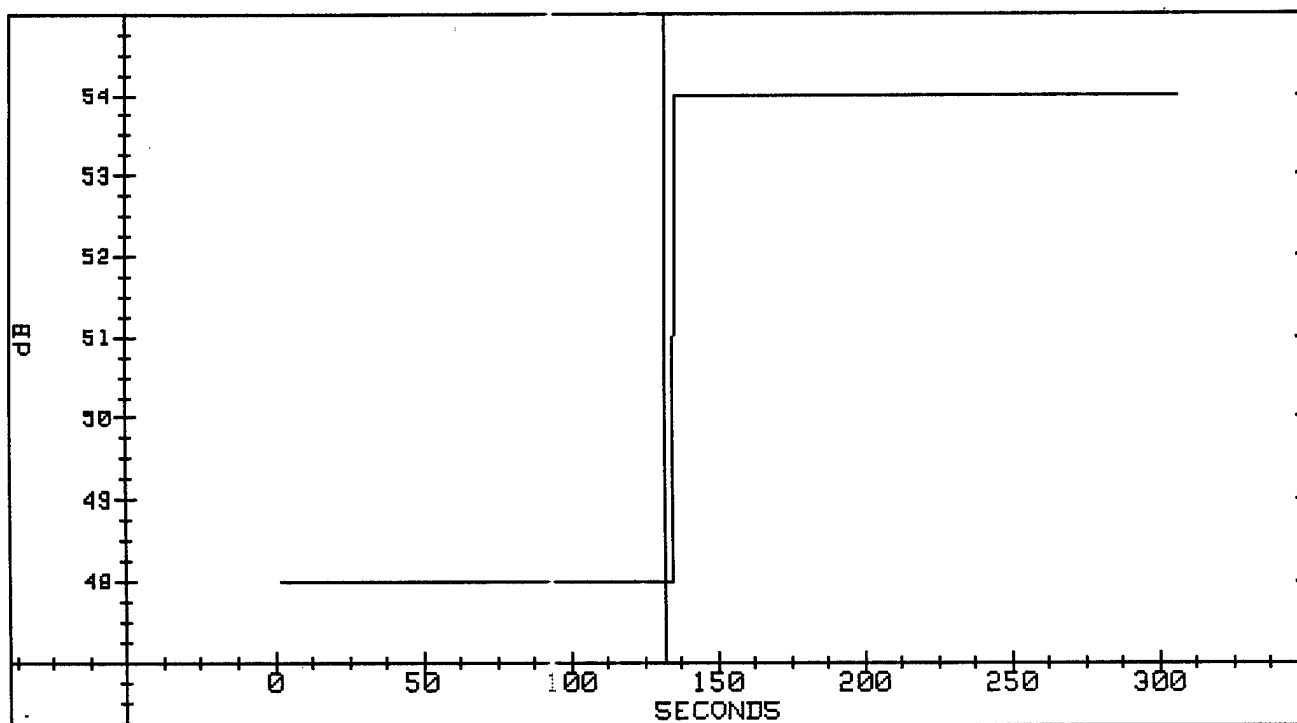
Ch2 RES Attenuation

DAY 179 TIME 2:45 PASS 25 m= 70.15, sd= .636624



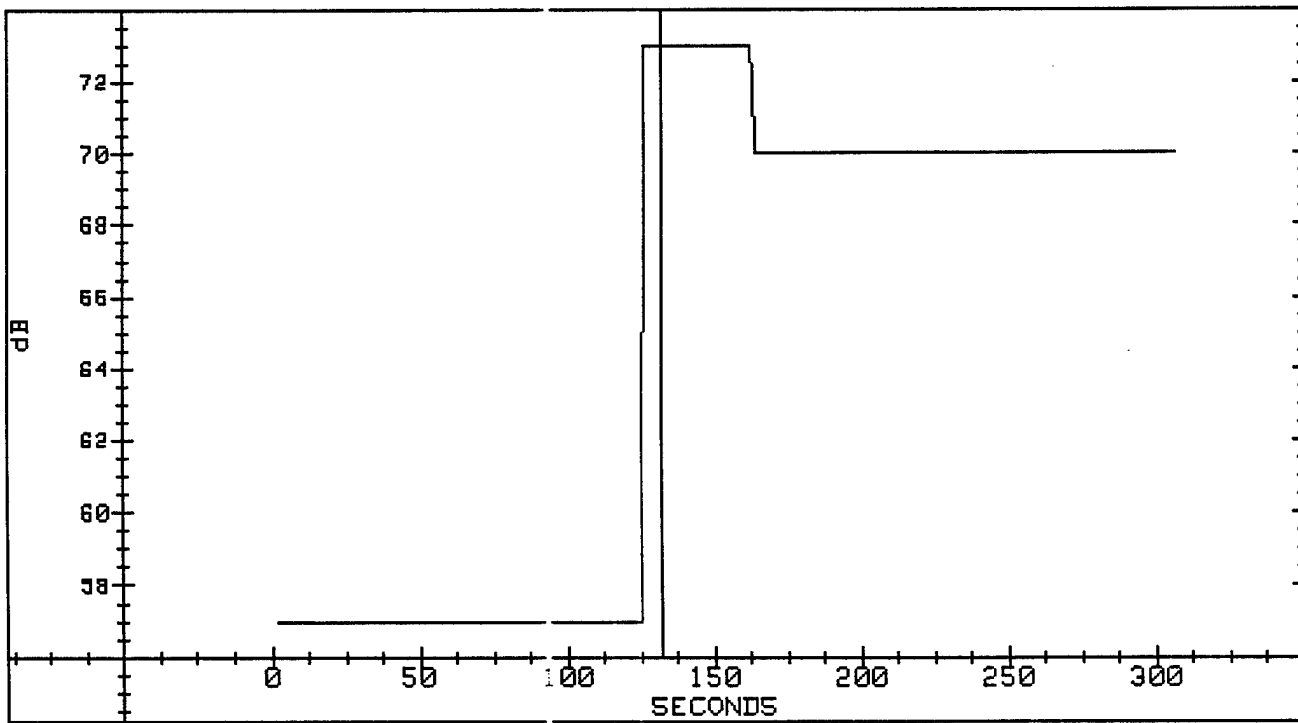
Ch3 RES Attenuation

DAY 179 TIME 2:45 PASS 25 m= 54, sd= 0



Ch4 RES Attenuation

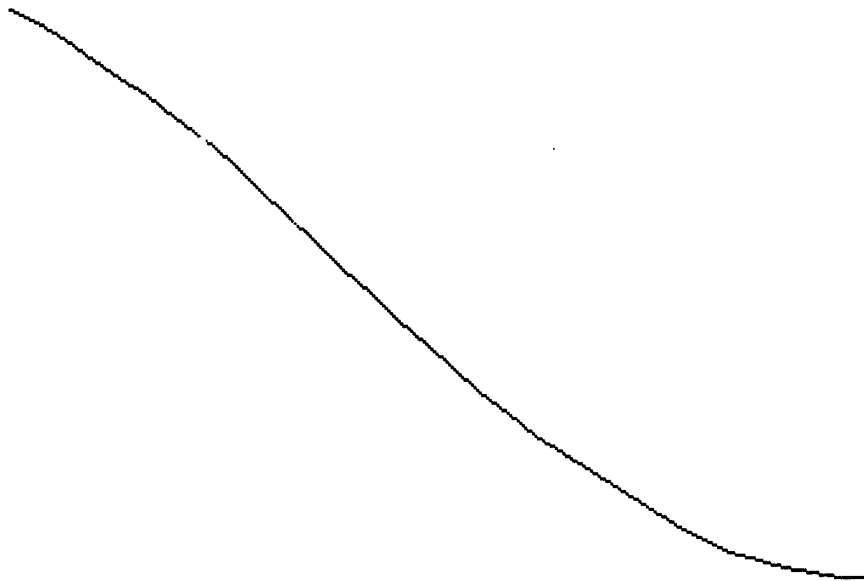
DAY 179 TIME 2:45 PASS 25 m= 70.26, sd= .038155



## GPS ALTITUDE

MEAN= 5948.09 STANDARD DEVIATION= 162.198

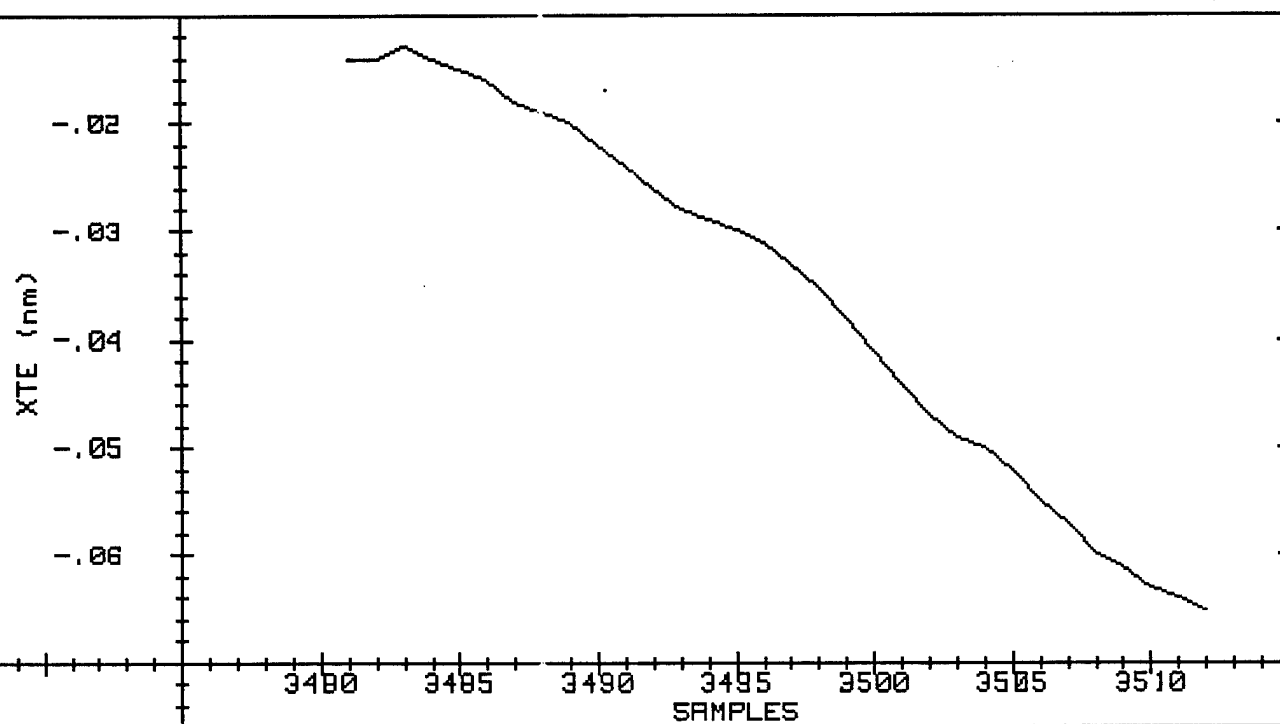
DATE: June 27, 1995 PASS 25

OFF  
ON  
BAR6200  
6150  
6100  
6050  
6000  
5950  
5900  
5850  
5800  
5750  
FEET3480 3485 3490 3495 3500 3505 3510  
SAMPLES

GPS Cross Track Error

MEAN- -.0358438 STANDARD DEVIATION- .0172357

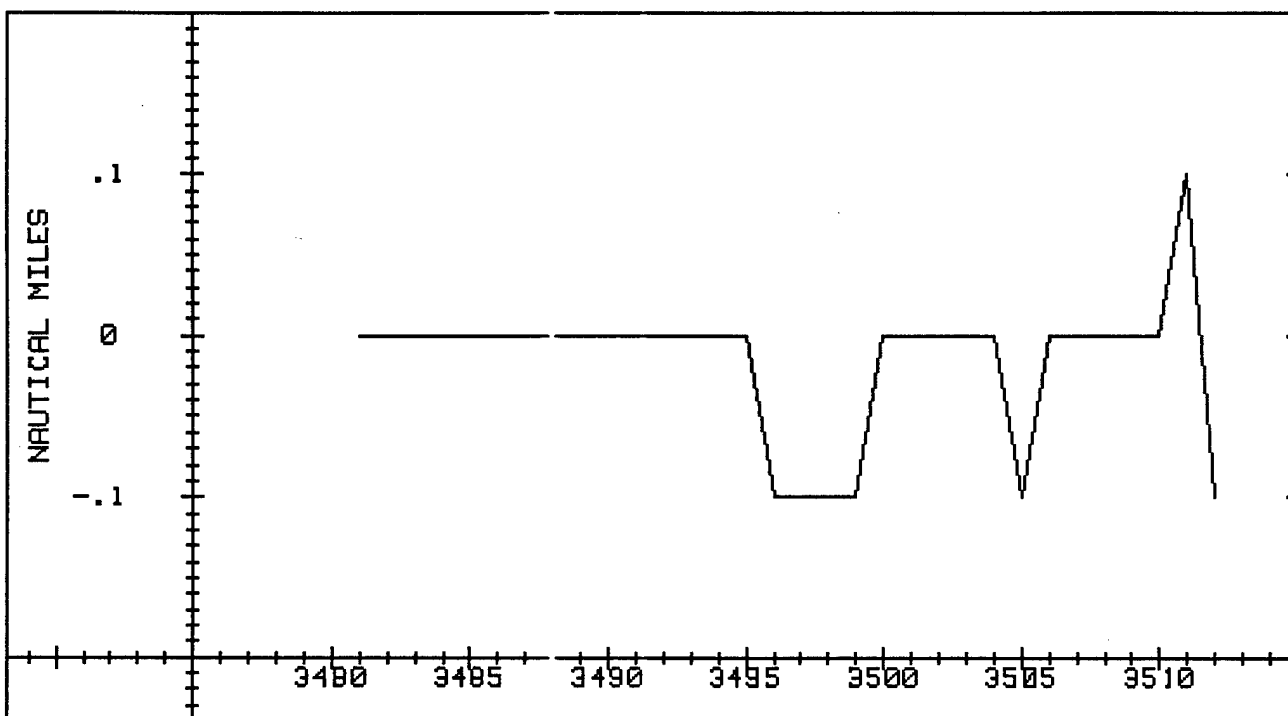
DATE: June 27, 1995 PASS 25



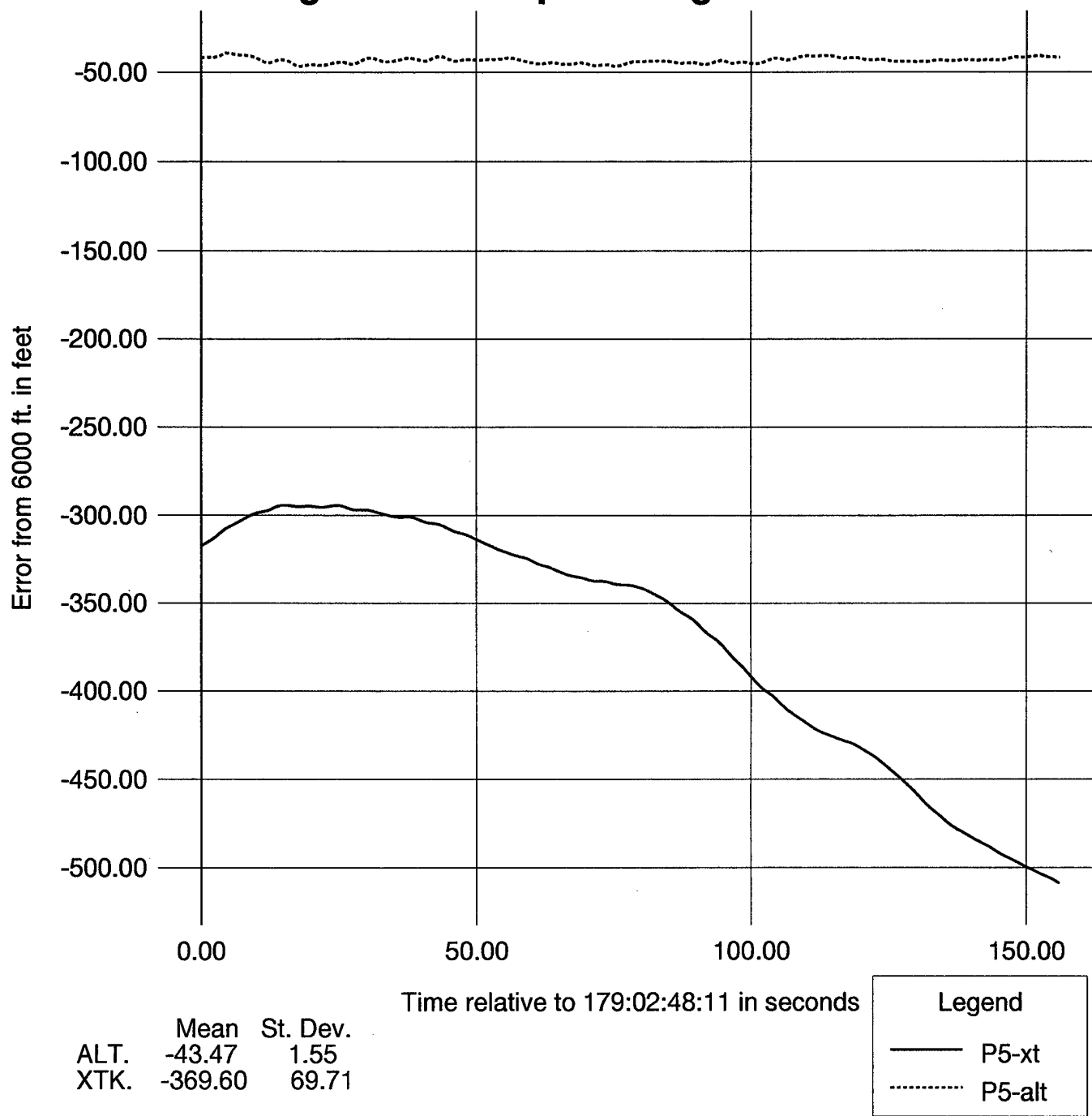
INS CROSS TRACK ERROR

MEAN= -.015625 STANDARD DEVIATION= .0440835

DATE: June 27, 1995 PASS 25



# Portage, ME - June 27, 1995 - Pass 25 - Xtk. and Alt. Errors Higher alt. and port are greater than zero



28 Jun 1995  
Tape: 1441

Post-line Data Sheet  
Line 45  
Mission: Presque Isle DAY 3

Time: 179:03:02:38  
Pass 27  
Req.# 24

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	5957 ft s.d. =	3 Swath Ctr Ang:	15.0°	15.0°	15.0°	15.0°
Slt. rng:	20207 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	18672	18672	18672	18672
Depr Ang:	25.0°	Near Rng Dep:	18.6°	18.6°	18.6°	18.6°
Des. trk:	270.0°	Far Rng Dep:	9.9°	9.9°	9.9°	9.9°
Start Sq:	90.0°	Atten (dB):	58.0	62.0	58.0	62.0
End Sq:	90.0°	RMS Video (%FS)	9.8	9.4	7.7	10.6

#### WAYPOINTS

Line_up:	N 46:40.86	W 68:04.28	Main Target:	IE
Start:	N 46:40.90	W 68:21.71	Mocomp Point:	
End:	N 46:40.90	W 68:36.25	Lat:	N 46:44.12
			Long:	W 68:28.98
From:	N 44:12.15	W 44:58.97	Tgt Trk:	0.0
To:	N 44:12.15	W 91:58.99	Tgt Vel:	0.0
			Alt:	770.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	->	10 sec
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)	
Swath width:	Single	Ave Gndspd:	Real	-> 250.2 kts
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4	
Position Reference:	ON	GPS Vel/Pos Reference		
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft	
Range Gate Delta:	0.0 ft	Range Tracking is	OFF	
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF	
TX Chirp Filename:	CTLU2B	RX Chirp Filename:	CRL1N0A	
Ave Ref Vel	-> -1.8 fps (s.d.= .9)			
Ave Fil Vel	-> -.4 fps (s.d.= .7)			

NML XMIT PWR	ANET BIAS	Tape Footage	Drive no.
X: -70.0	Elevation: 0.0°	Starting:	7665 ft (1)
L: -70.0	Azimuth: 0.0°	Ending:	8917 ft (1)
C: -70.0	Pitch: 0.0°		
P: 39.8			

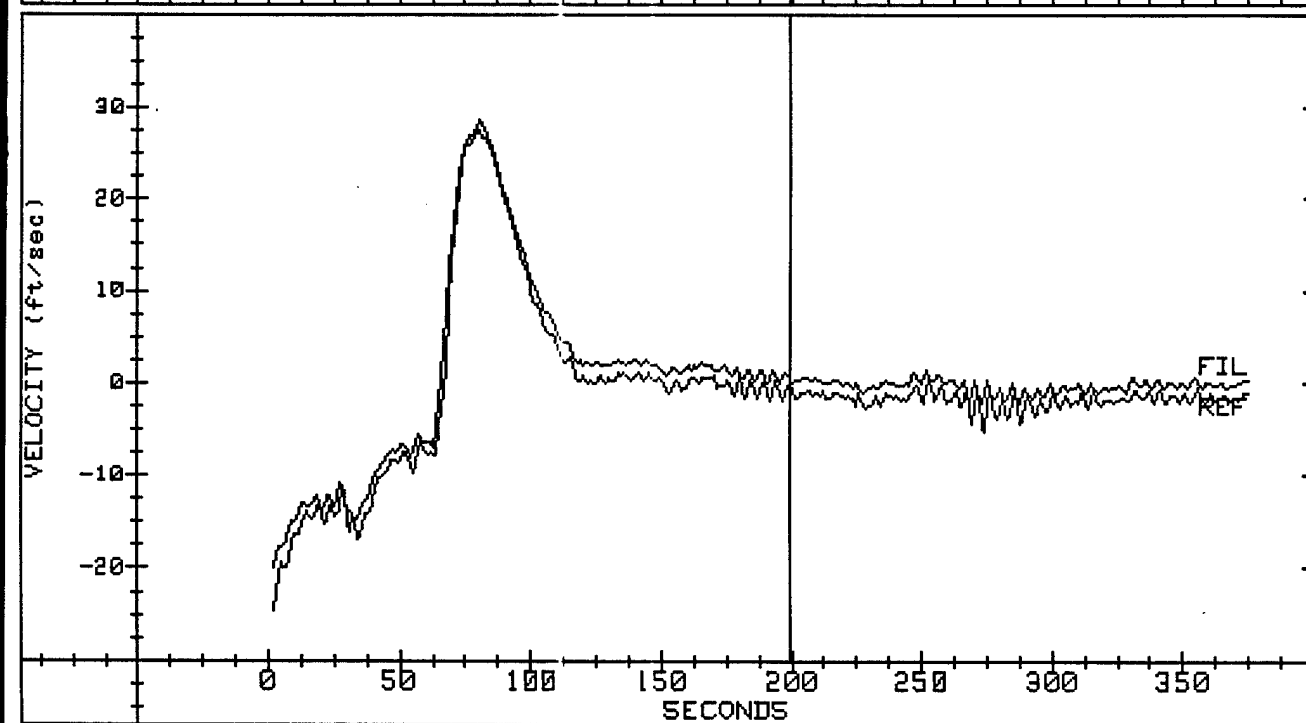
Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 2079.0	X: 63.8 dB	Start: 03:02:38
Y: 1867.0	L: 63.8 dB	End: 03:05:17
Z: 17142.0	C: 63.8 dB	

#### Mocomp Counters

Start:	1564287	0017DE7Fh	CPA (UCT):	00:00:00
End:	1590796	0018460Ch	Alt:	0 ft (GPS)
			Lat:	N 0:00: 0
			Lon:	E 0:00: 0

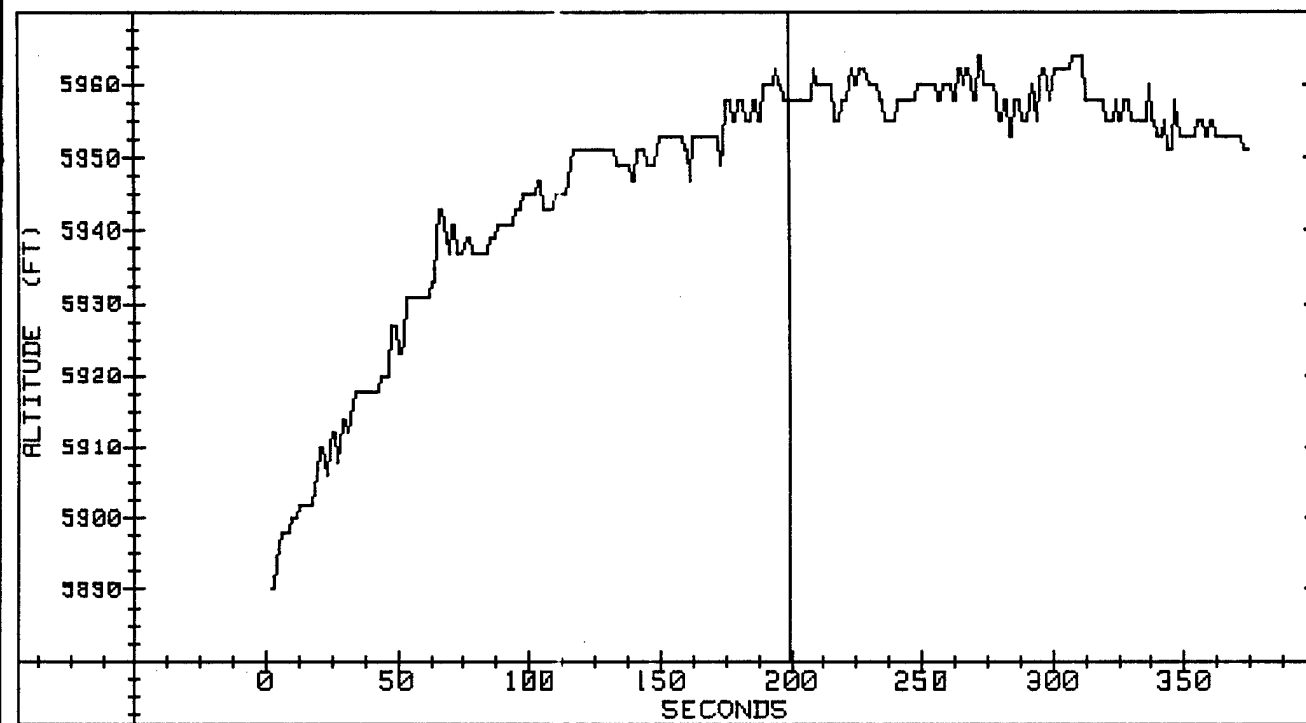
FILTERED vs. REF. VELOCITY  
DAY 179 TIME 2:59 PASS 27

INS  
LORAN  
GPS



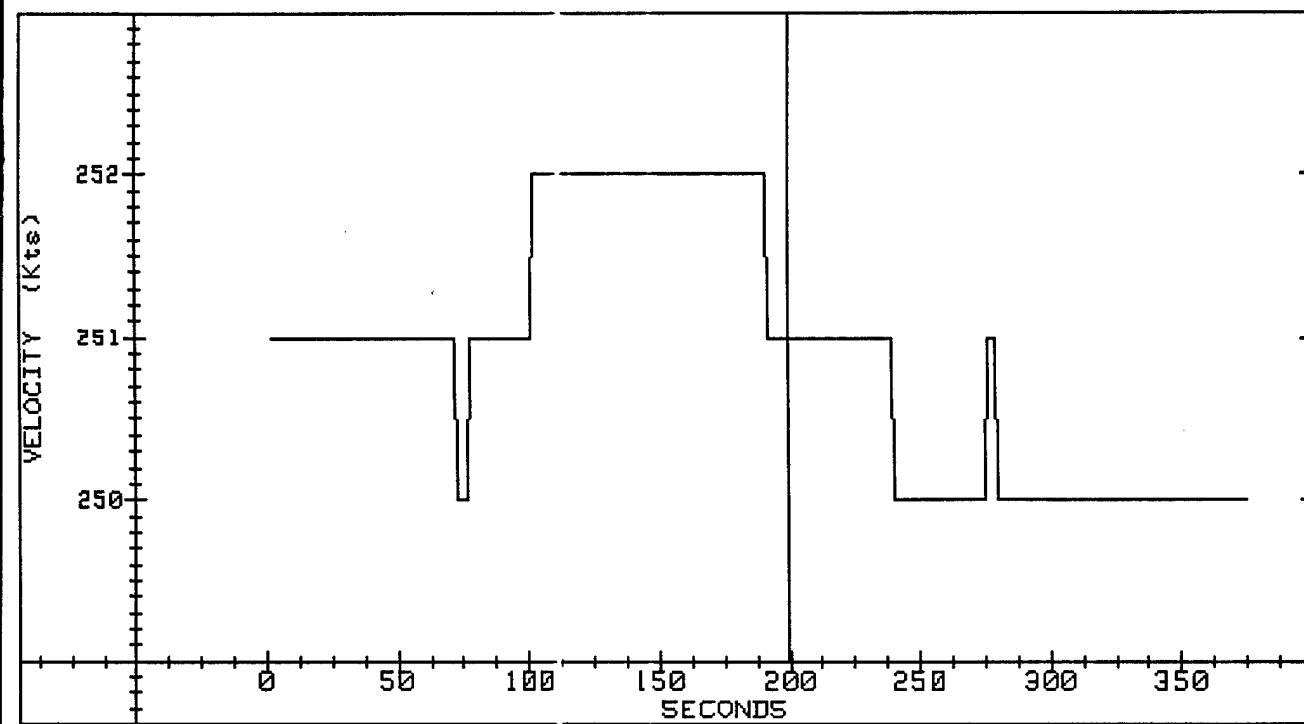
# BARO ALTITUDE

DAY 179 TIME 2:59 PASS 27 m= 5957, sd= 3.35886



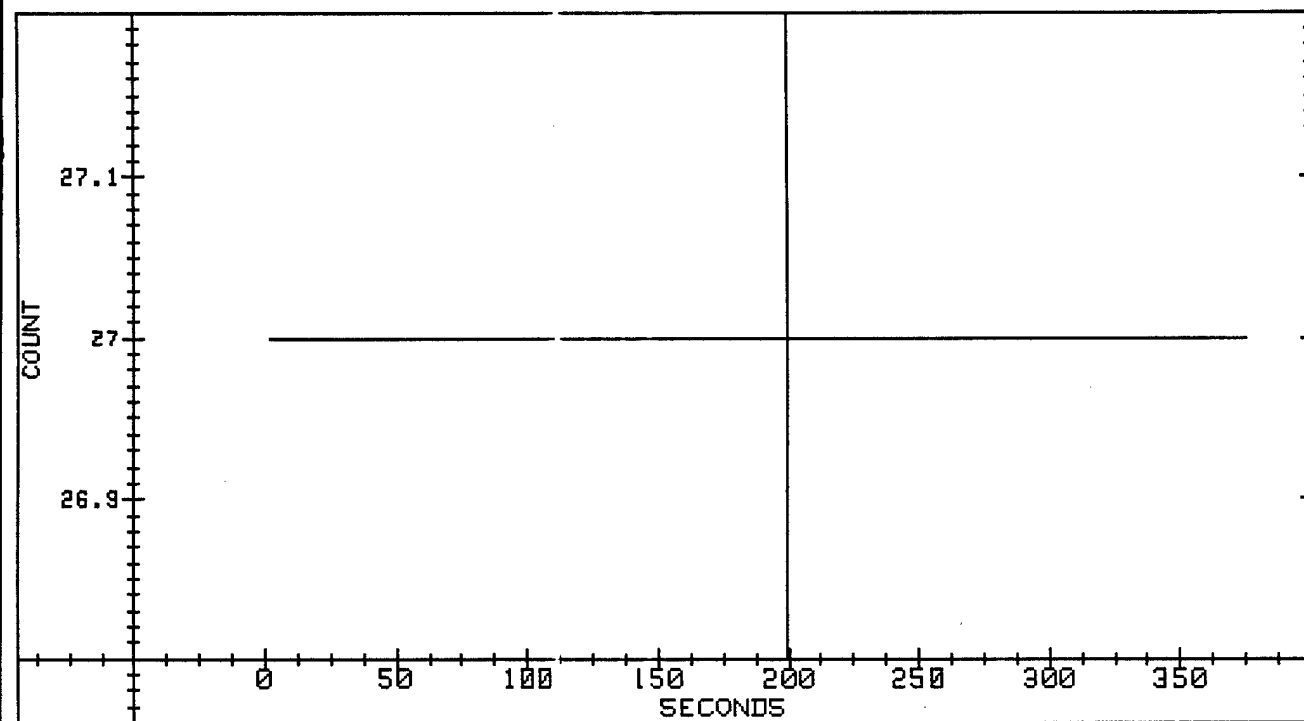
## INS GROUND SPEED

DAY 179 TIME 2:59 PASS 27 m= 250.2, sd= .375467



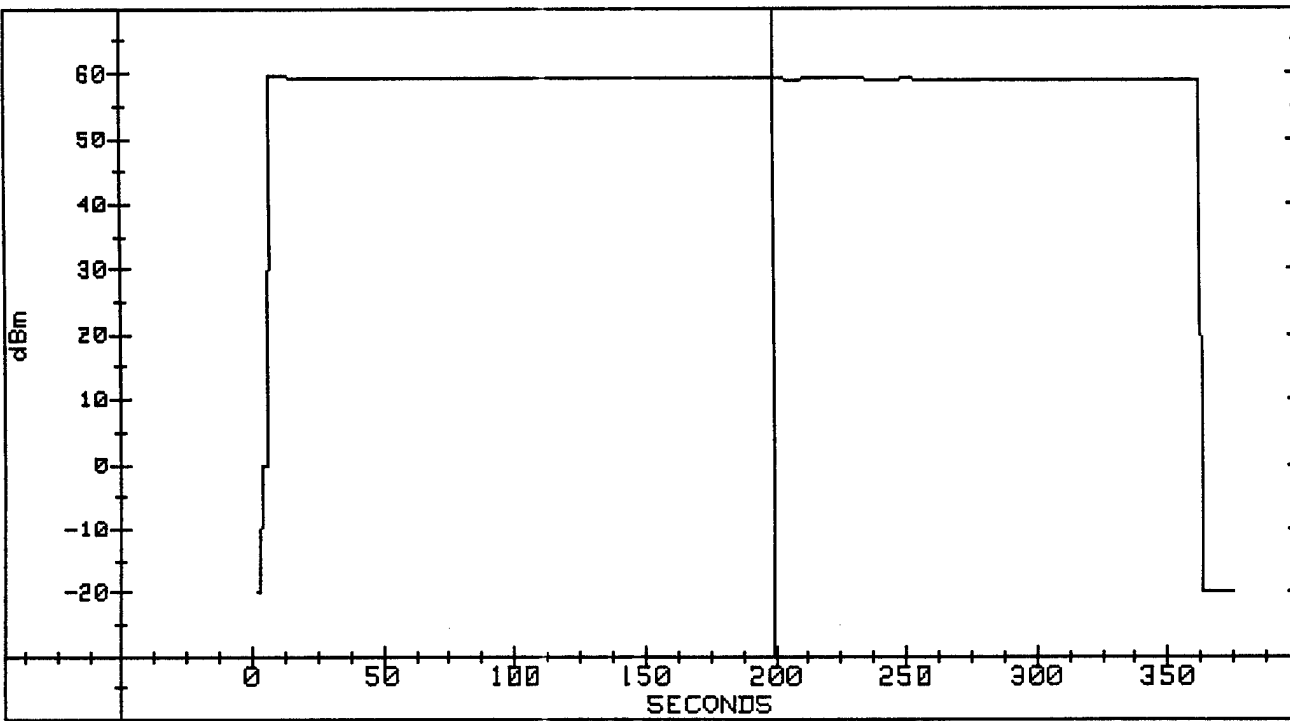
# PASS NUMBER

DAY 179 TIME 2:59 PASS 27 m- 27, sd- 0



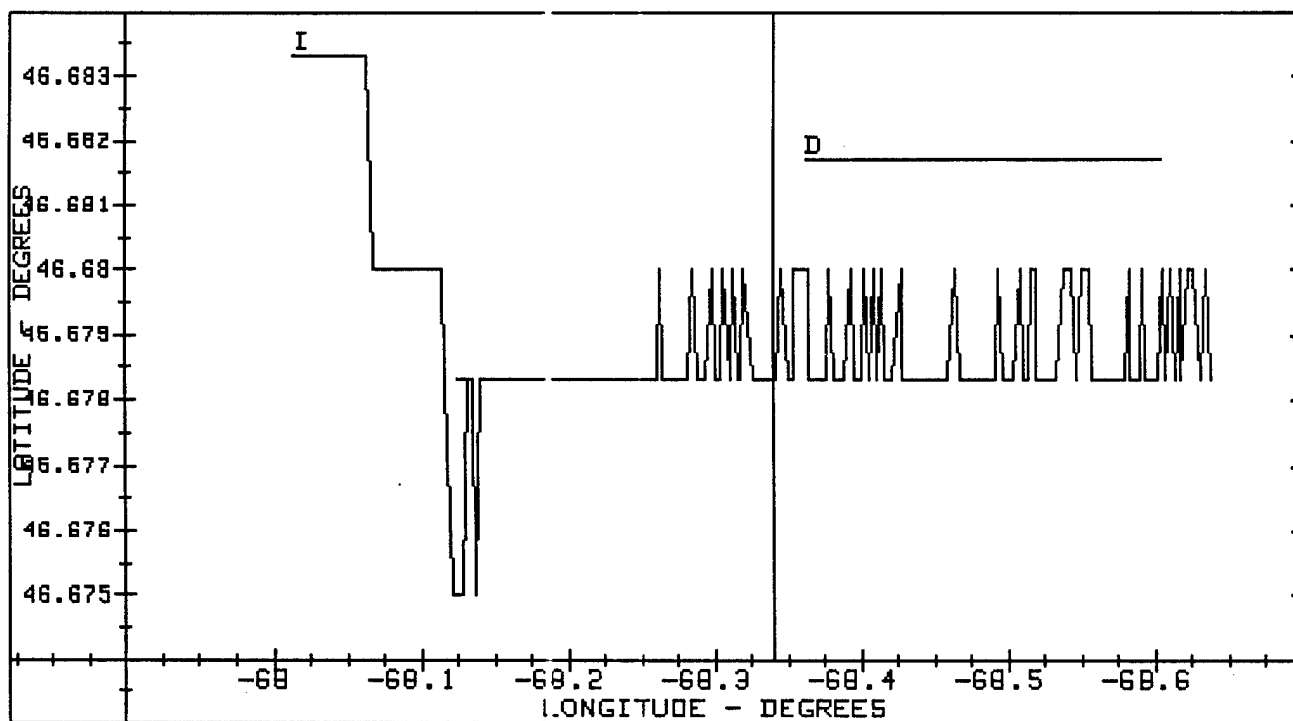
P Band Power

DAY 179 TIME 2:59 PASS 27 m= 52.55, sd= 21.6494



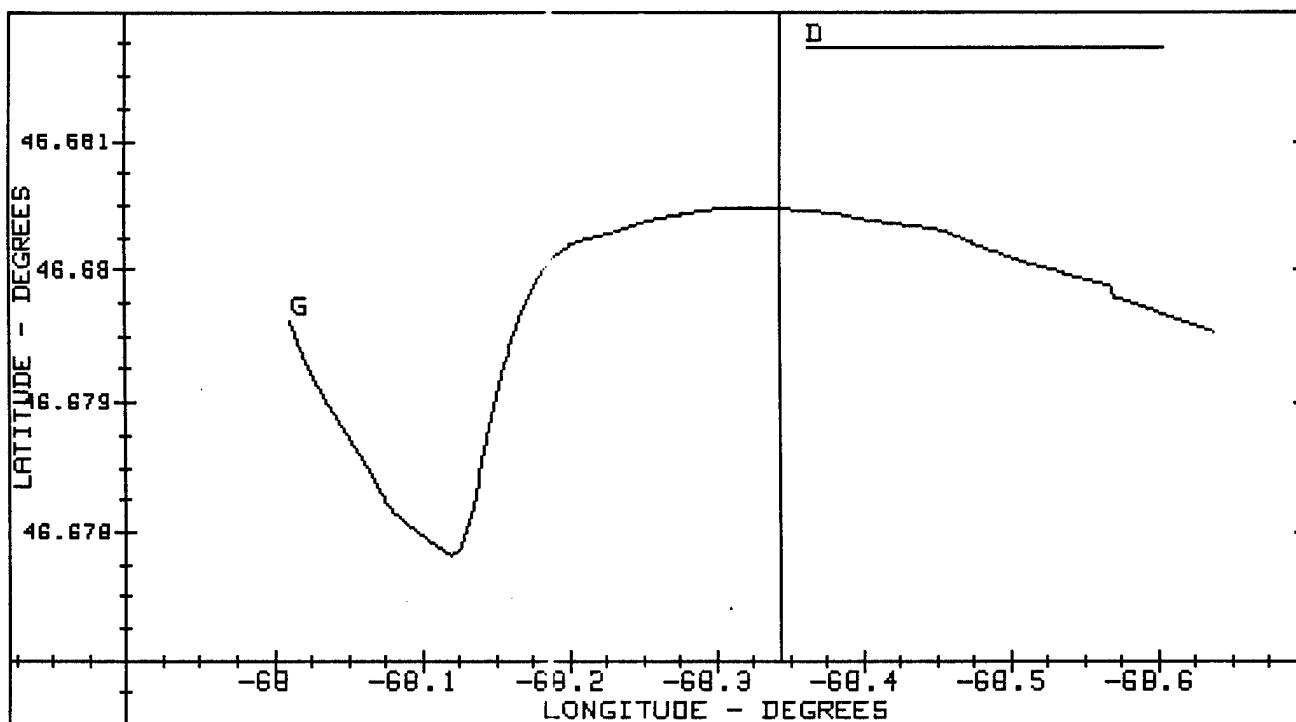
INS AIRCRAFT POSITION

DAY 179 TIME 2:59 PASS 27



GPS AIRCRAFT POSITION

DAY 179 TIME 2:59 PASS 27



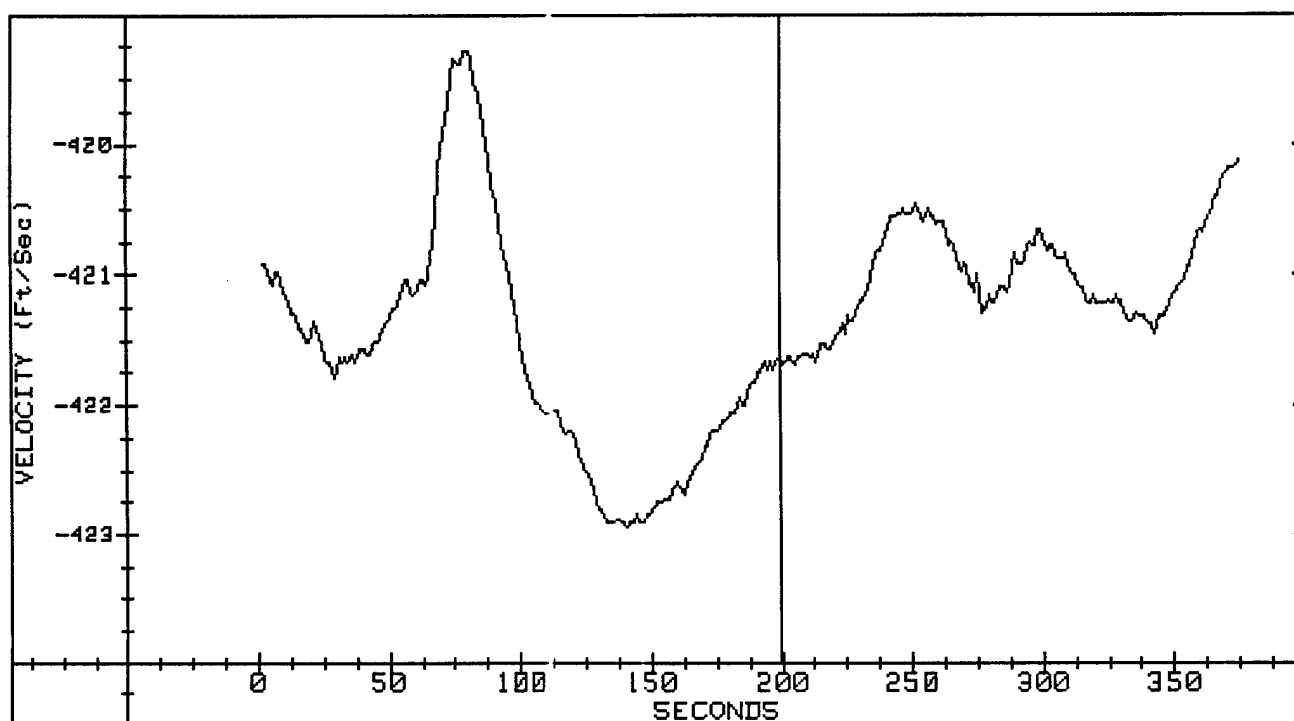
GPS V<sub>e</sub>

DAY 179

TIME 2:59

PASS 27

m= -420.9, sd= .337767



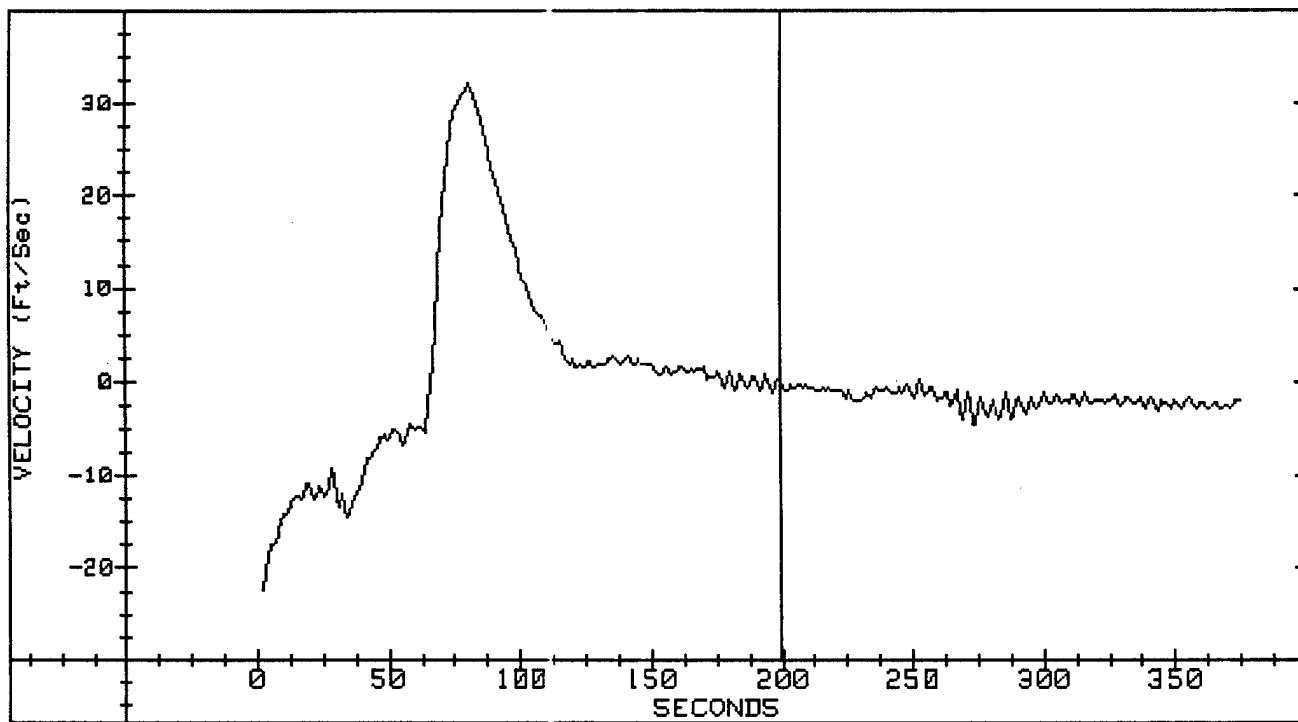
GPS Vn

DAY 179

TIME 2:59

PASS 27

m= -1.922, sd= .03506



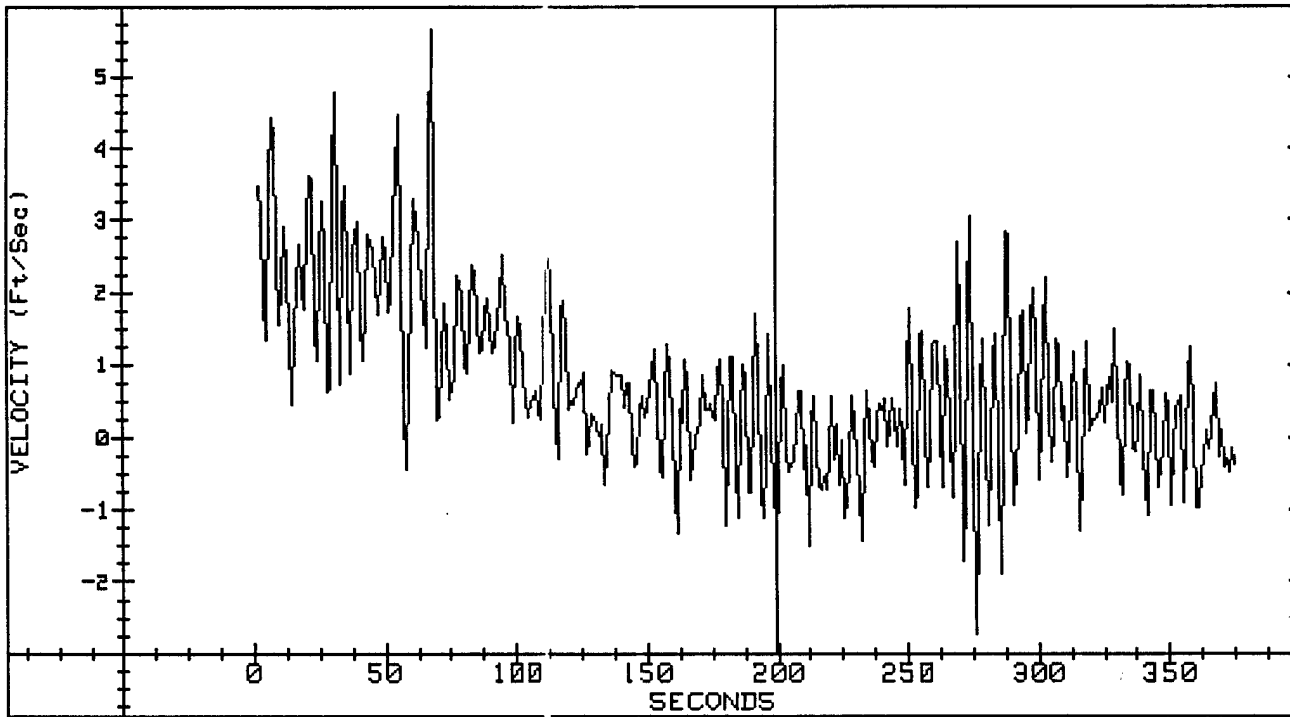
GPS Vv

DRY 179

TIME 2:59

PRSS 27

m= .2158, sd= .913576



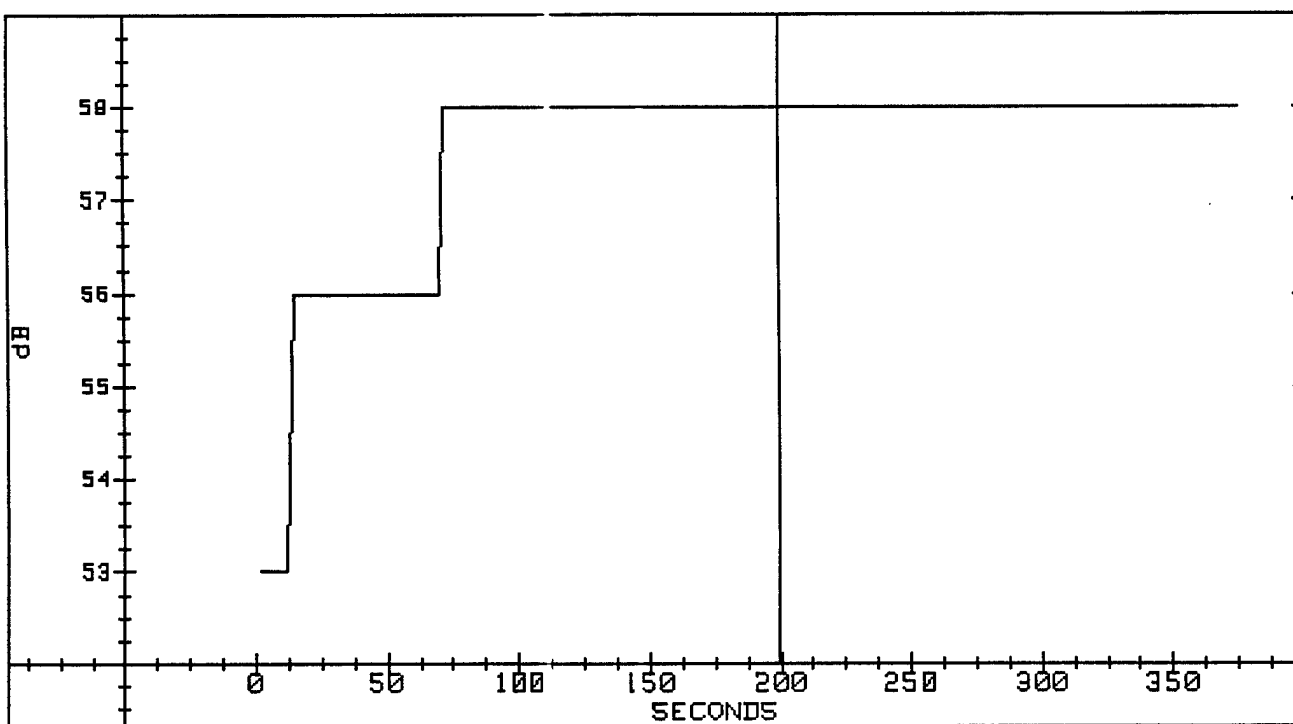
Ch1 RES Attenuation

DAY 179

TIME 2:59

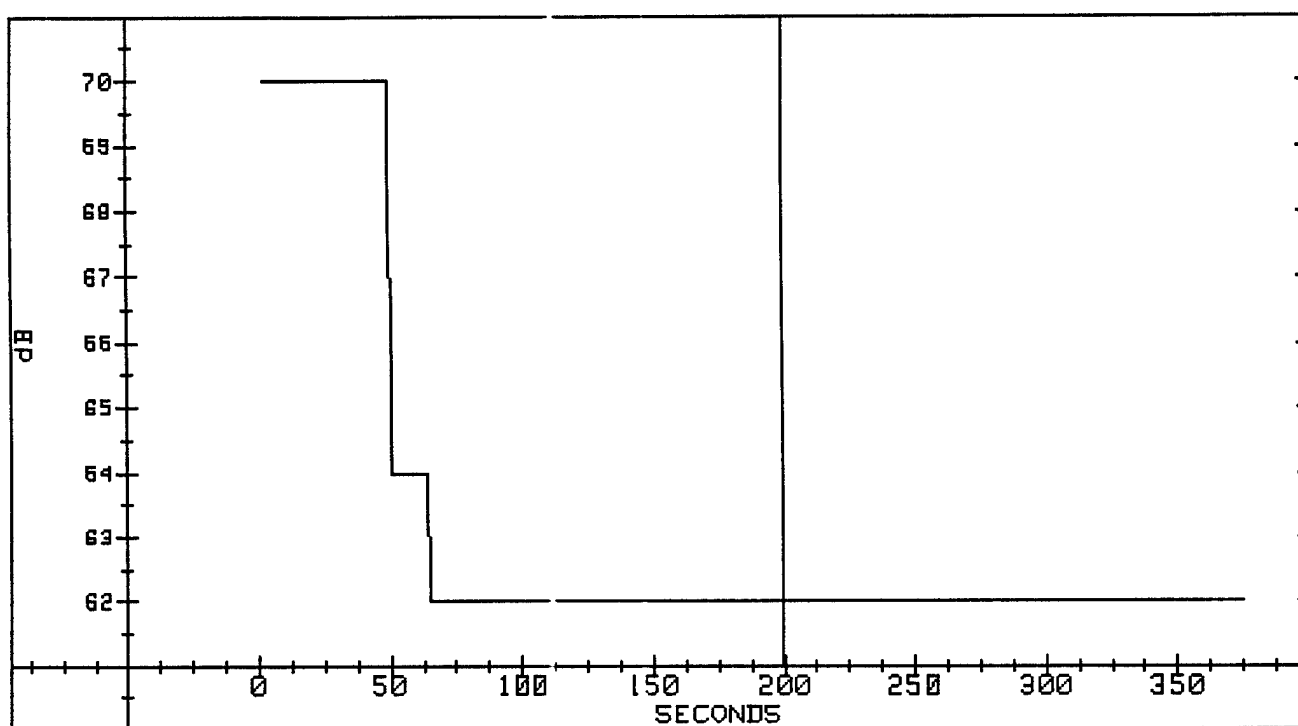
PASS 27

m= 58, sd= 0



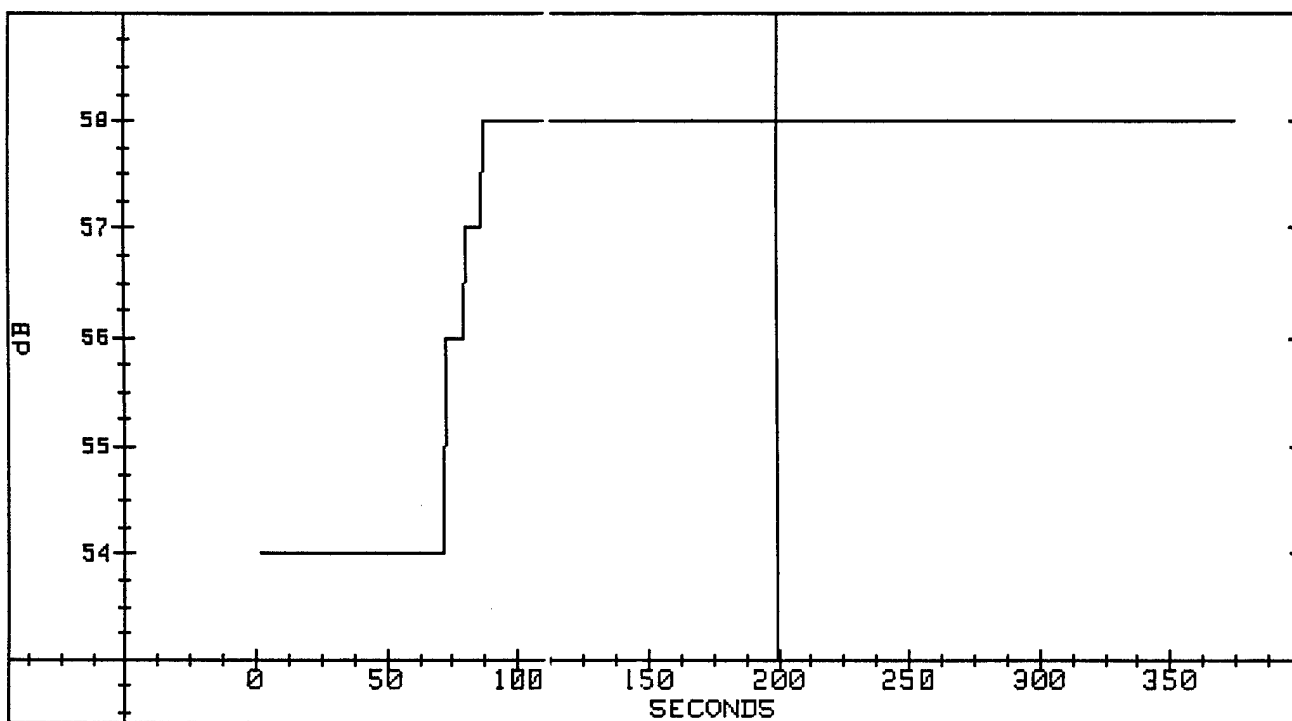
Ch2 RES Attenuation

DAY 179 TIME 2:59 PASS 27 m= 62. sd= 0



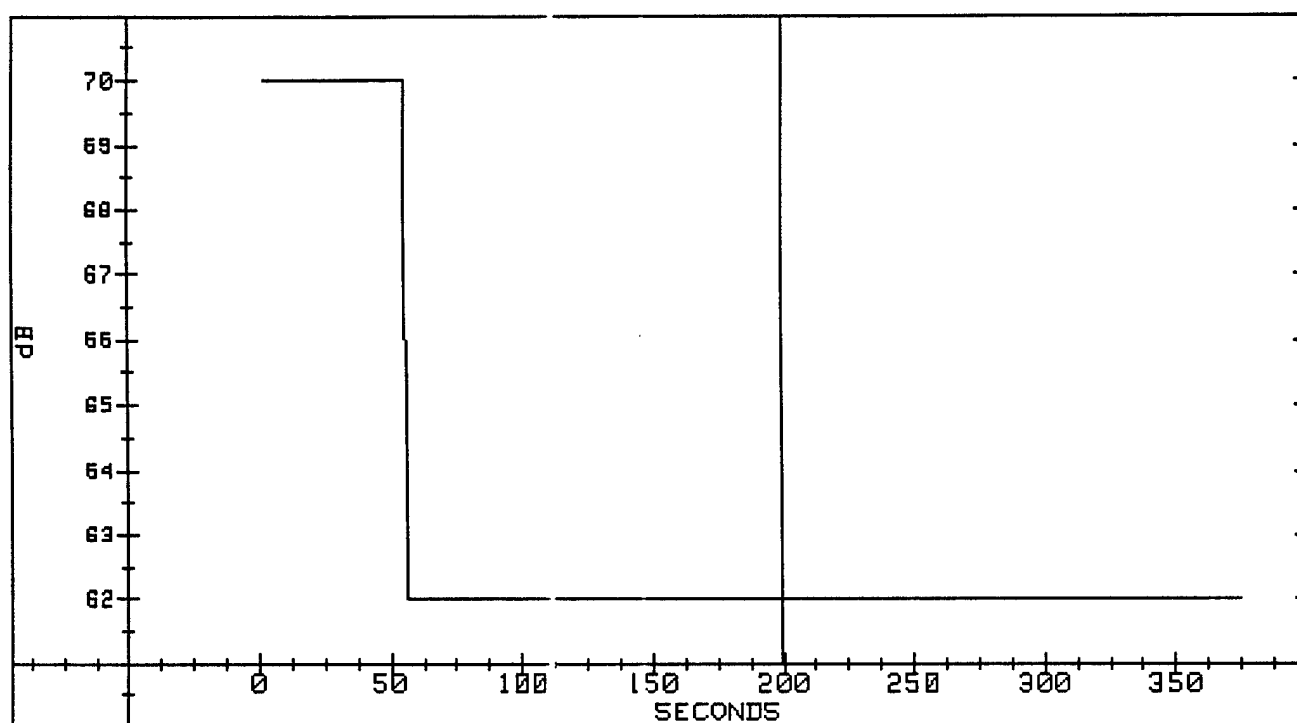
Ch3 RES Attenuation

DAY 179 TIME 2:59 PASS 27 m= 50, sd= 0



Ch4 RES Attenuation

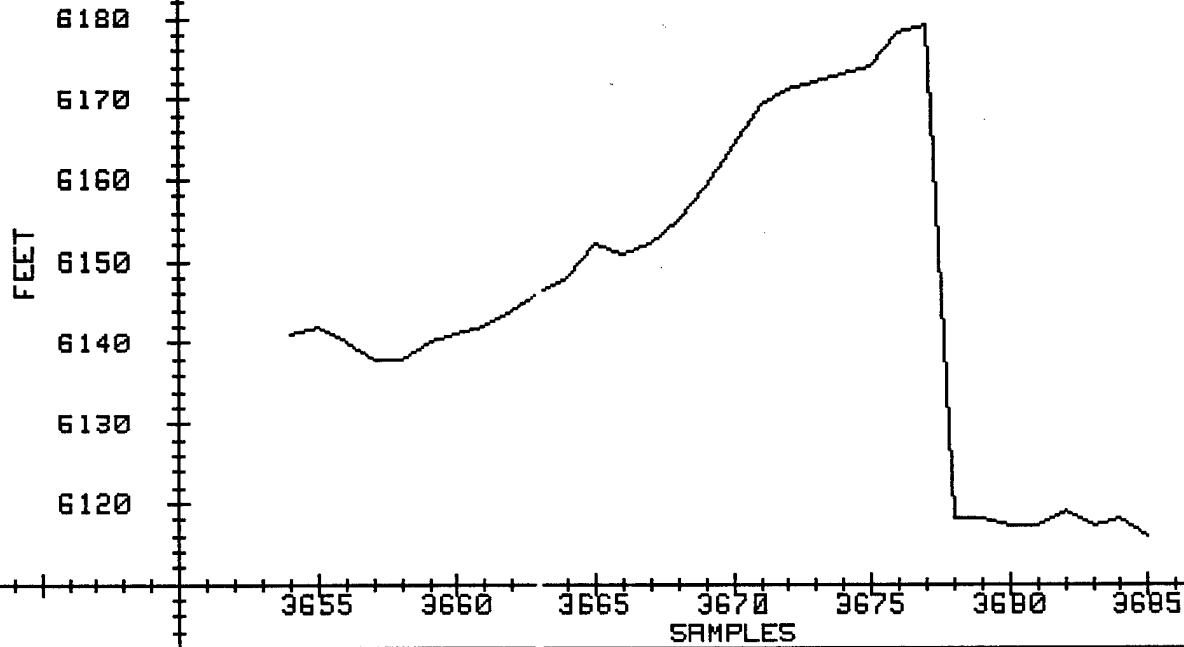
DAY 179 TIME 2:59 PASS 27 m= 62, sd= 0



## GPS ALTITUDE

MEAN= 6145.28 STANDARD DEVIATION= 20.0815

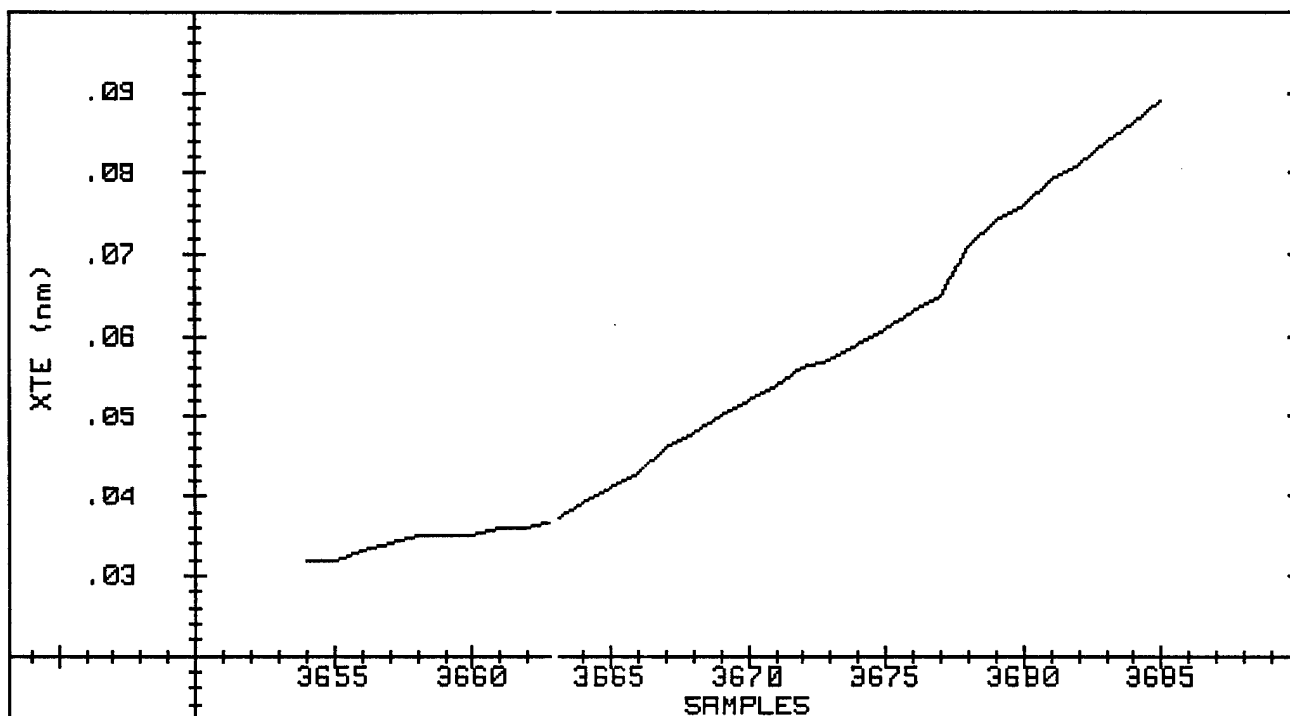
DATE: June 27, 1995 PASS 27

OFF  
ON  
BAR

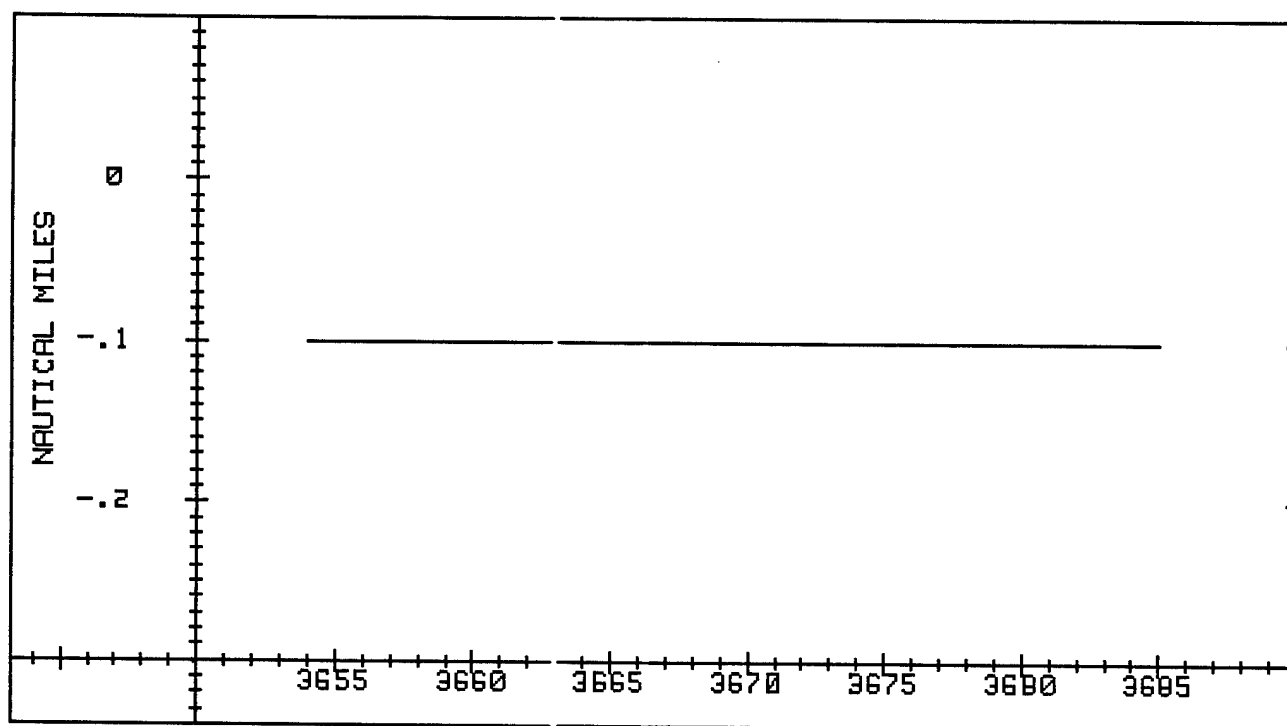
GPS Cross Track Error

MEAN= .0537188 STANDARD DEVIATION= .0180507

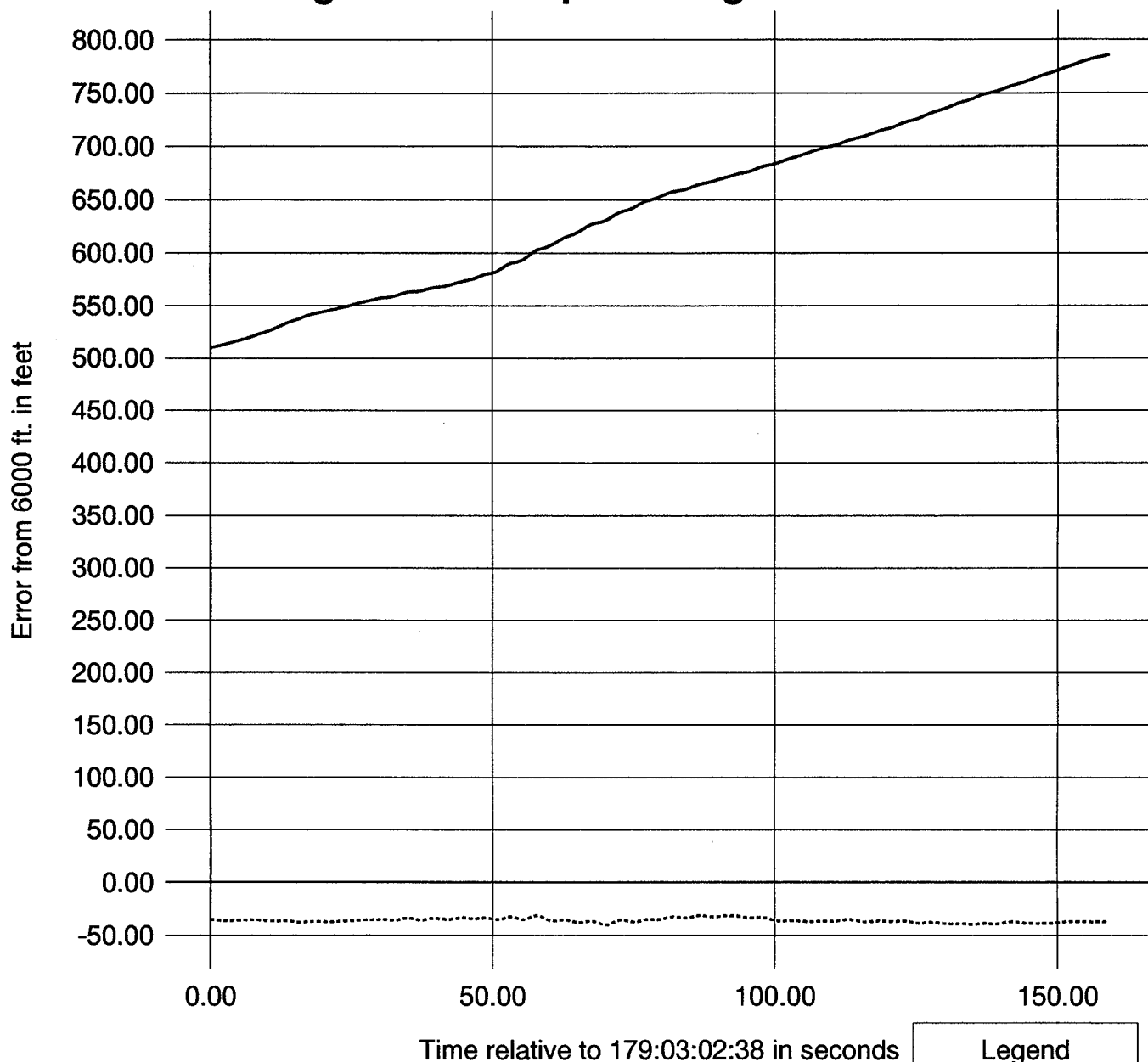
DATE: June 27, 1995 PASS 27



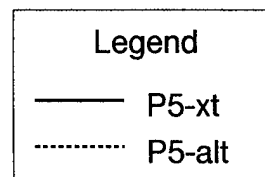
INS CROSS TRACK ERROR  
MEAN= -.1 STANDARD DEVIATION= 1.31709E-9  
DATE: June 27, 1995 PASS 27



# Portage, ME - June 27, 1995 - Pass 27 - Xtk. and Alt. Errors Higher alt. and port are greater than zero



	Mean	St. Dev.
ALT.	-36.02	1.99
XTK.	645.78	82.27



28 Jun 1995  
Tape: 1441

Post-line Data Sheet  
Line 47  
Mission: Presque Isle DAY 3

Time: 179:03:13:11  
Pass 28  
Req.# 25

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	5947 ft s.d.=	2 Swath Ctr Ang:	15.0°	15.0°	15.0°	15.0°
Slt. rng:	20207 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	18672	18672	18672	18672
Depr Ang:	25.0°	Near Rng Dep:	18.6°	18.6°	18.6°	18.6°
Des. trk:	90.0°	Far Rng Dep:	9.8°	9.8°	9.8°	9.8°
Start Sq:	90.0°	Atten (dB):	48.0	61.0	47.0	61.0
End Sq:	90.0°	RMS Video (%FS)	27.0	17.2	20.1	18.1

#### WAYPOINTS

	Latitude	Longitude
Line_up:	N 46:47.28	W 68:53.71
Start:	N 46:47.33	W 68:36.25
End:	N 46:47.33	W 68:21.71
From:	N 44:18.04	W 92:01.47
To:	N 44:18.04	W 44:56.49

Main Target: IE

Mocomp Point:

Lat: N 46:44.12

Long: W 68:28.98

Tgt Trk: 0.0 Tgt Vel: 0.0

Alt: 770.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel: 1  
Resolution: N/A  
Swath width: Single  
RMS Time Constant: 2^7  
Position Reference: ON  
Atten. Tracking: OFF  
Range Gate Delta: 0.0 ft  
Azimuth Presum Rate: Presum6  
TX Chirp Filename: CTLBU2B

Filter damping is Hi -> 10 sec  
PRF Factor is FAST (262.5 kts)  
Ave Gndspd: Real -> 251.6 kts  
Mocomp Off for Chnl 1, 2, 3, 4  
GPS Vel/Pos Reference  
Adj Gnd Scene: 5000.0 ft  
Range Tracking is OFF  
Clutterlock Reference: OFF  
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> 2.9 fps (s.d.= 8.6)  
Ave Fil Vel -> 4.9 fps (s.d.= 8.3)

NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation: 0.0°		
L: -70.0	Azimuth: 0.0°	Starting: 8931 ft	(1)
C: -70.0	Pitch: 0.0°	Ending: 10190 ft	(1)
P: 39.7			

Vel Bias	CAL Atten
X: 2079.0	X: 63.8 dB
Y: 1867.0	L: 63.8 dB
Z: 17142.0	C: 63.8 dB

LINE Map Time (UCT)  
Start: 03:13:11  
End: 03:15:51

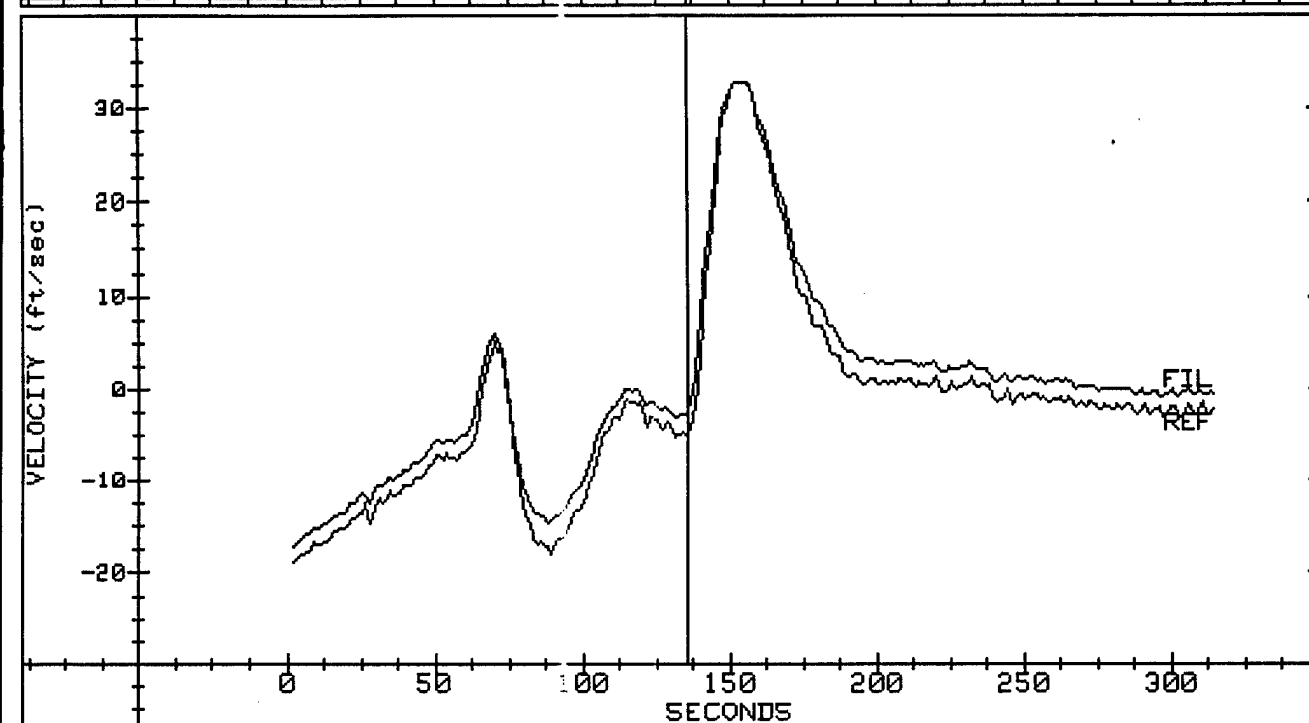
#### Mocomp Counters

Start: 1616643 0018AB03h  
End: 1643480 0019A3D8h

CPA (UCT): 00:00:00  
Alt: 0 ft (GPS)  
Lat: N 0:00:0  
Lon: E 0:00:0

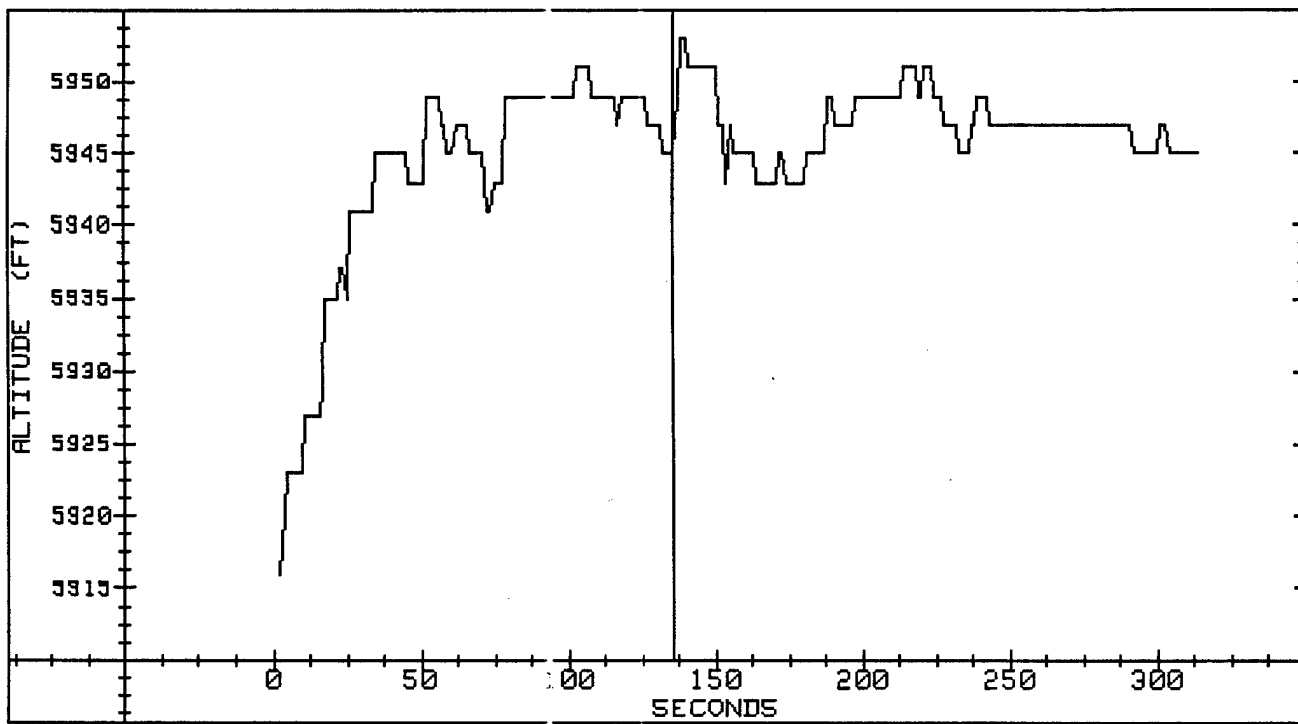
FILTERED vs. REF. VELOCITY  
DAY 179 TIME 3:10 PASS 20

INS  
LORAN  
GPS



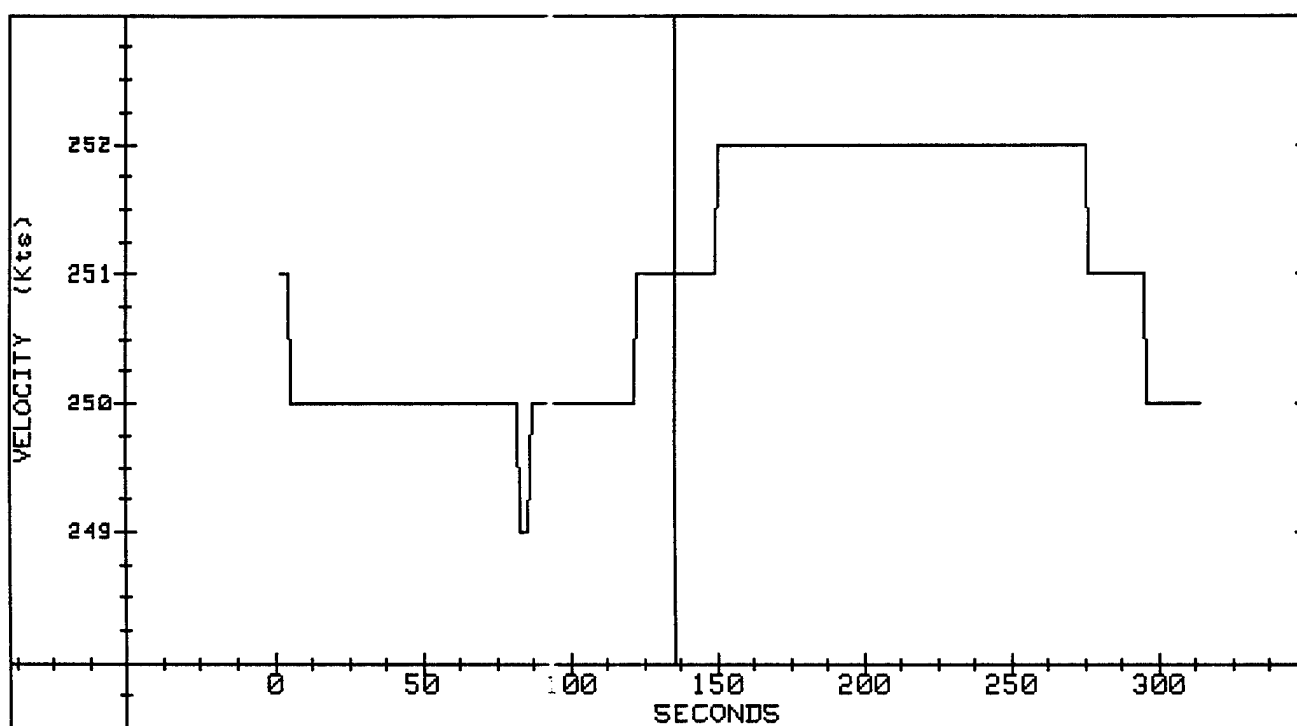
# BARO ALTITUDE

DAY 179 TIME 3:10 PASS 20 m= 5947. sd= 2.00001



## INS GROUND SPEED

DAY 179 TIME 3:10 PASS 28 m= 251.6, sd= .603004



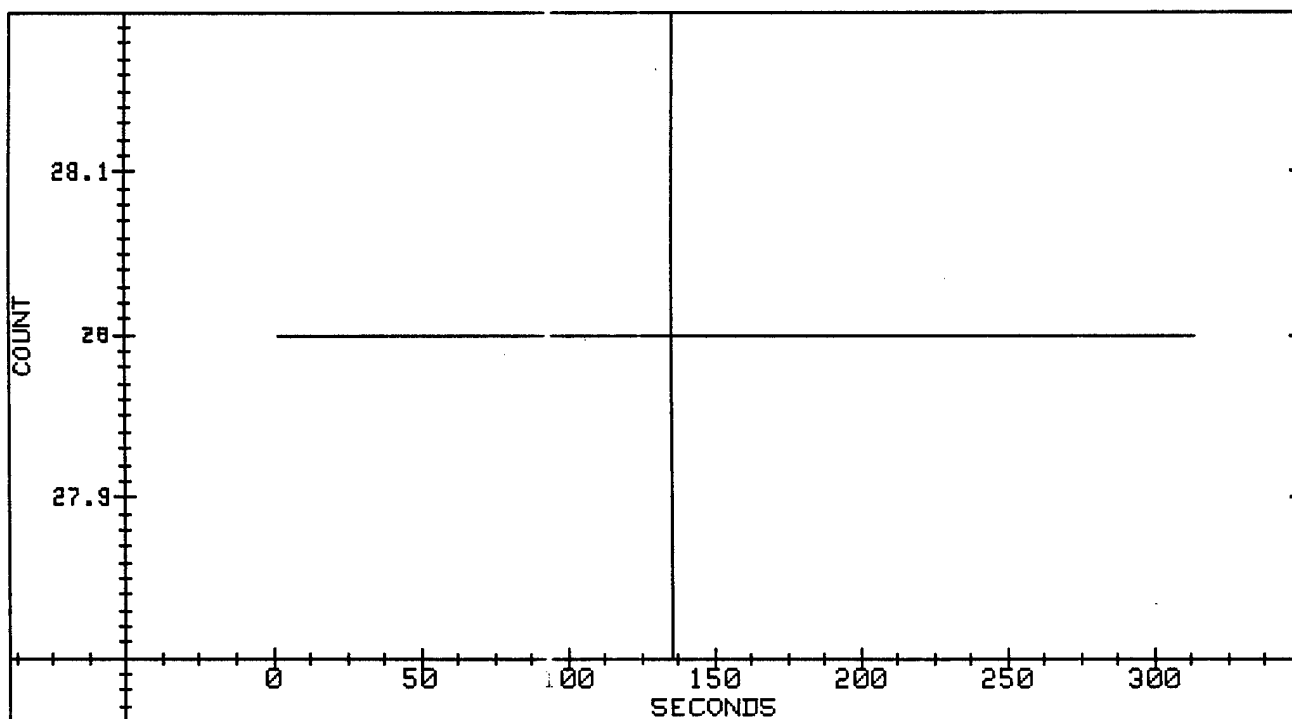
# PASS NUMBER

DAY 179

TIME 3:10

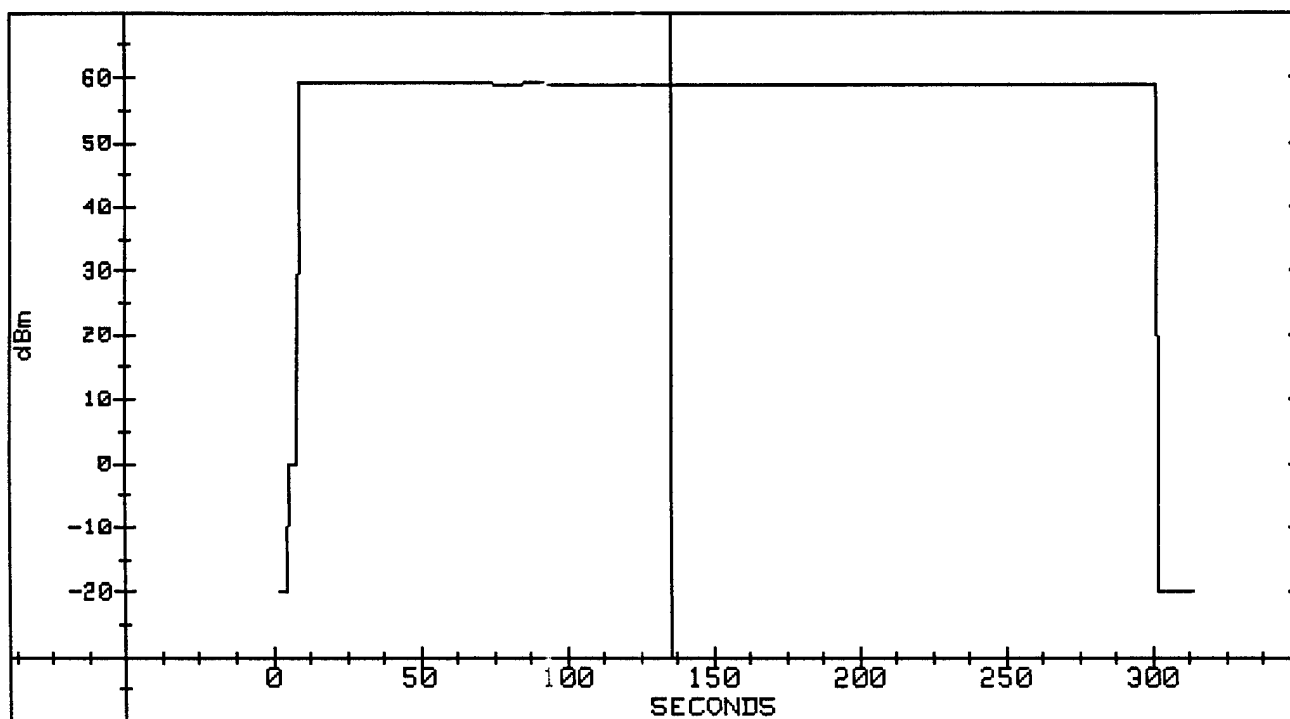
PASS 28

m= 28, sd= 0

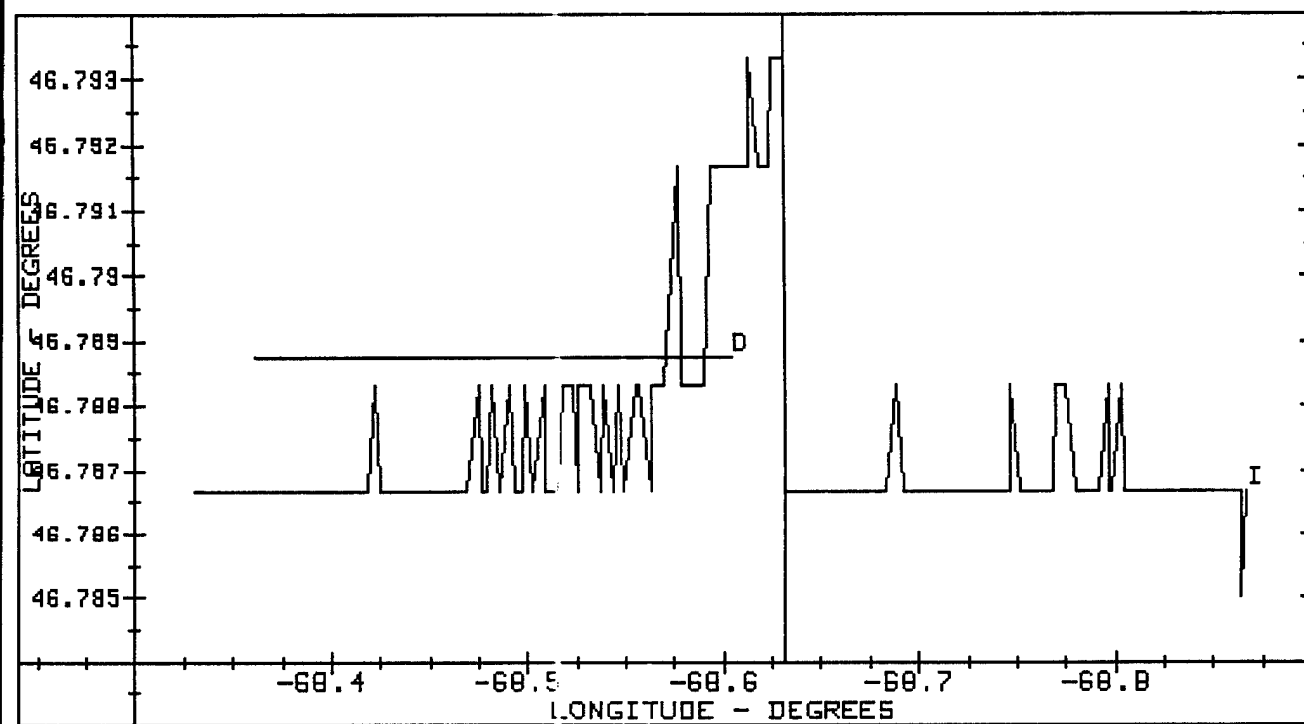


P Band Power

DAY 179 TIME 3:10 PASS 20 m= 52.52, sd= 21.494

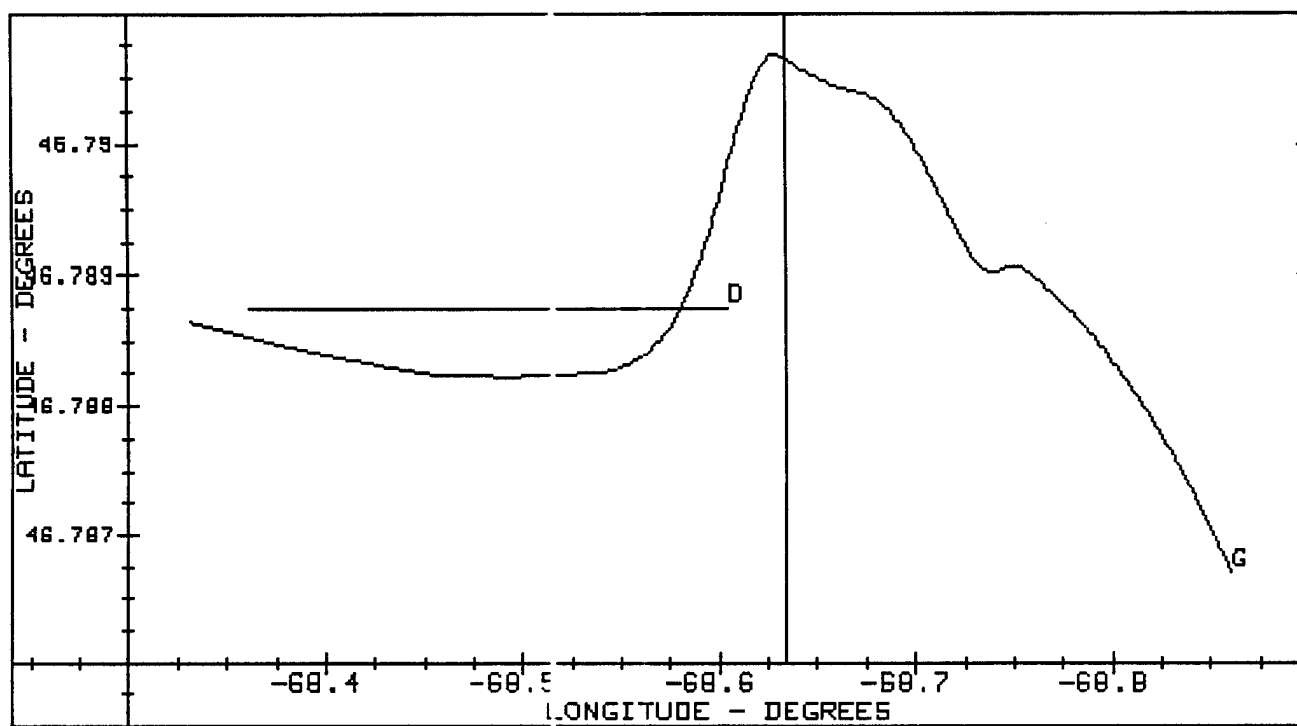


INS AIRCRAFT POSITION  
DAY 179 TIME 3:10 PASS 20



GPS AIRCRAFT POSITION

DAY 179 TIME 3:10 PASS 20



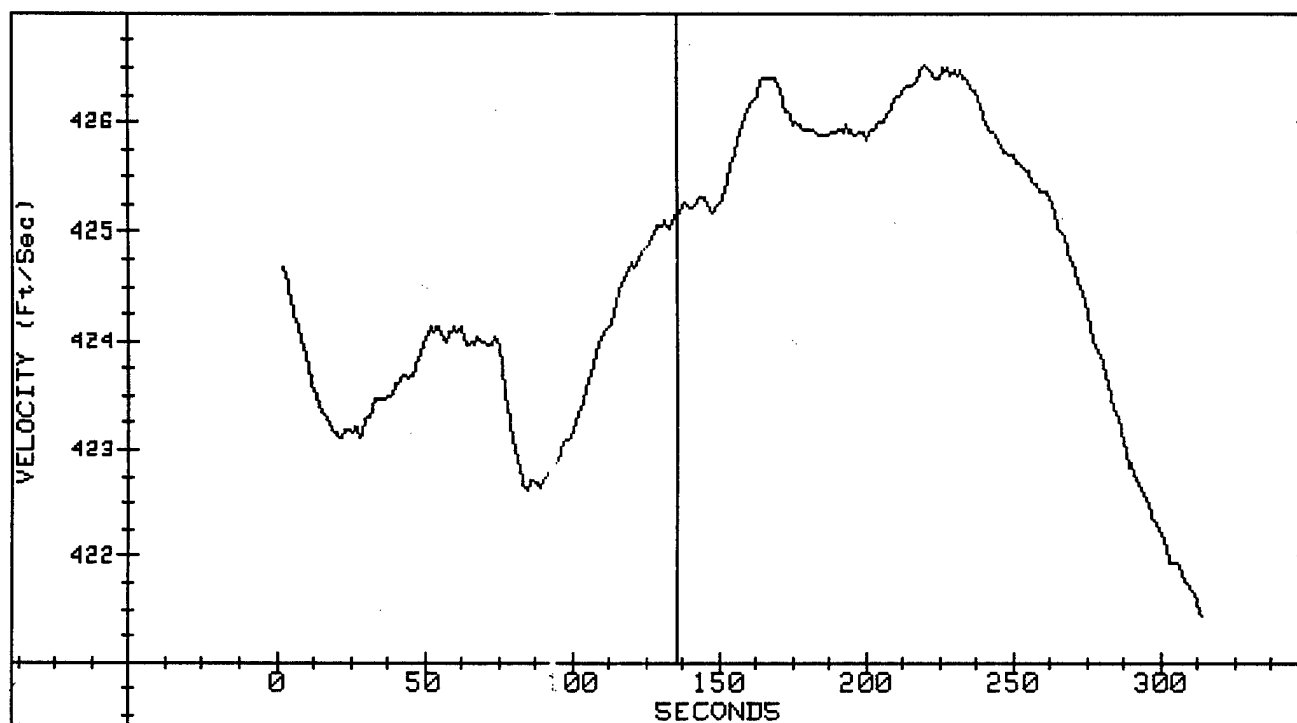
GPS V<sub>E</sub>

DRY 179

TIME 3:10

PASS 20

m= 425.1, sd= 1.52101



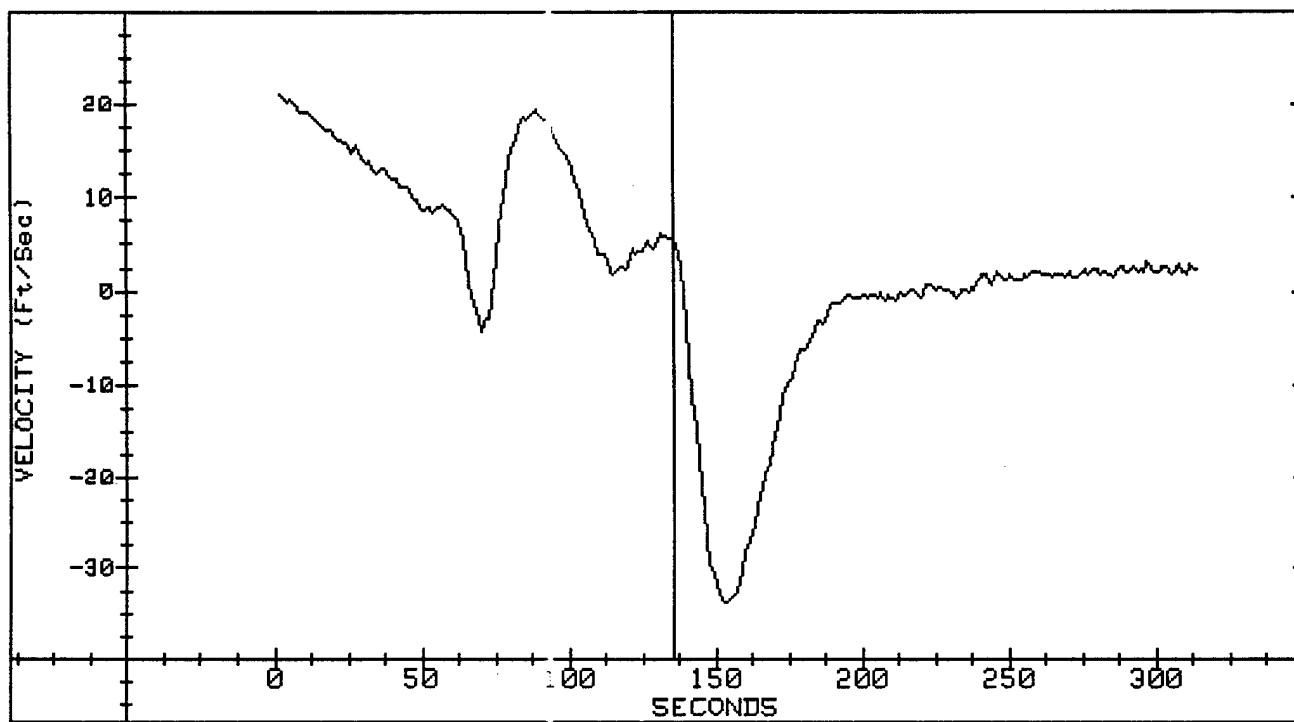
GPS Vn

DAY 179

TIME 3:10

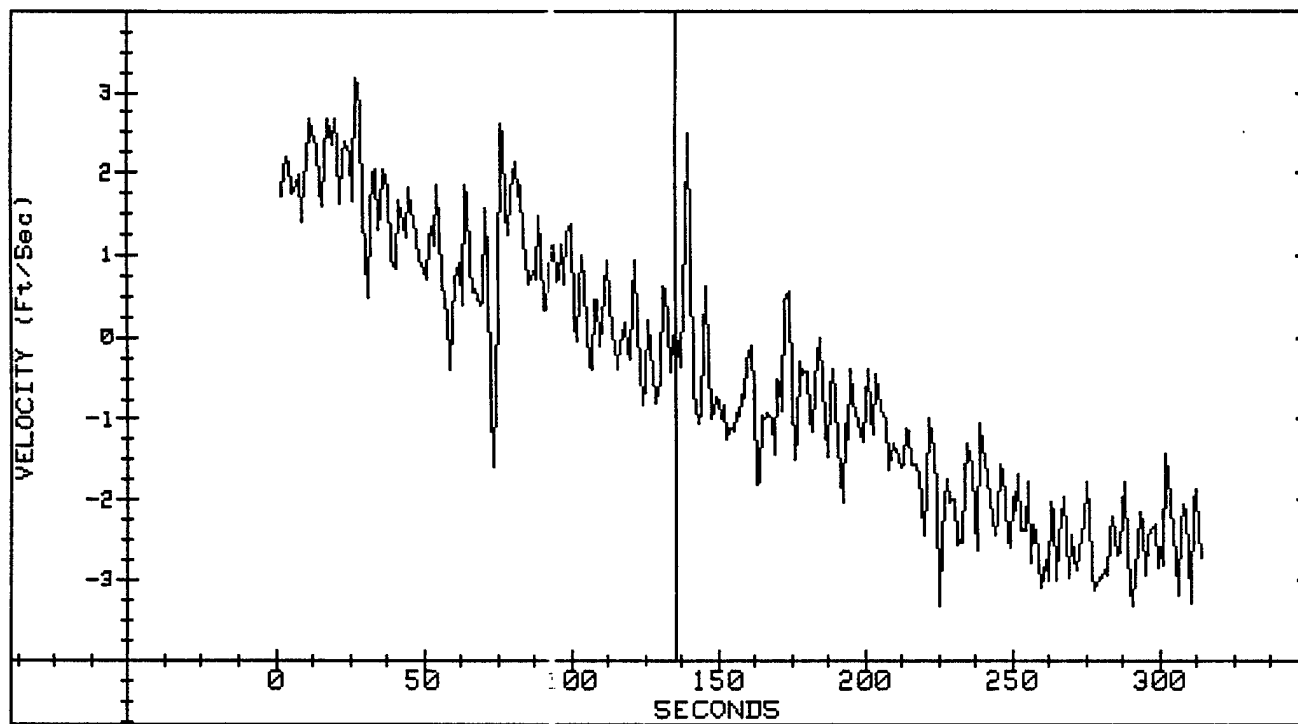
PASS 20

m= -2.640, sd= 0.66421



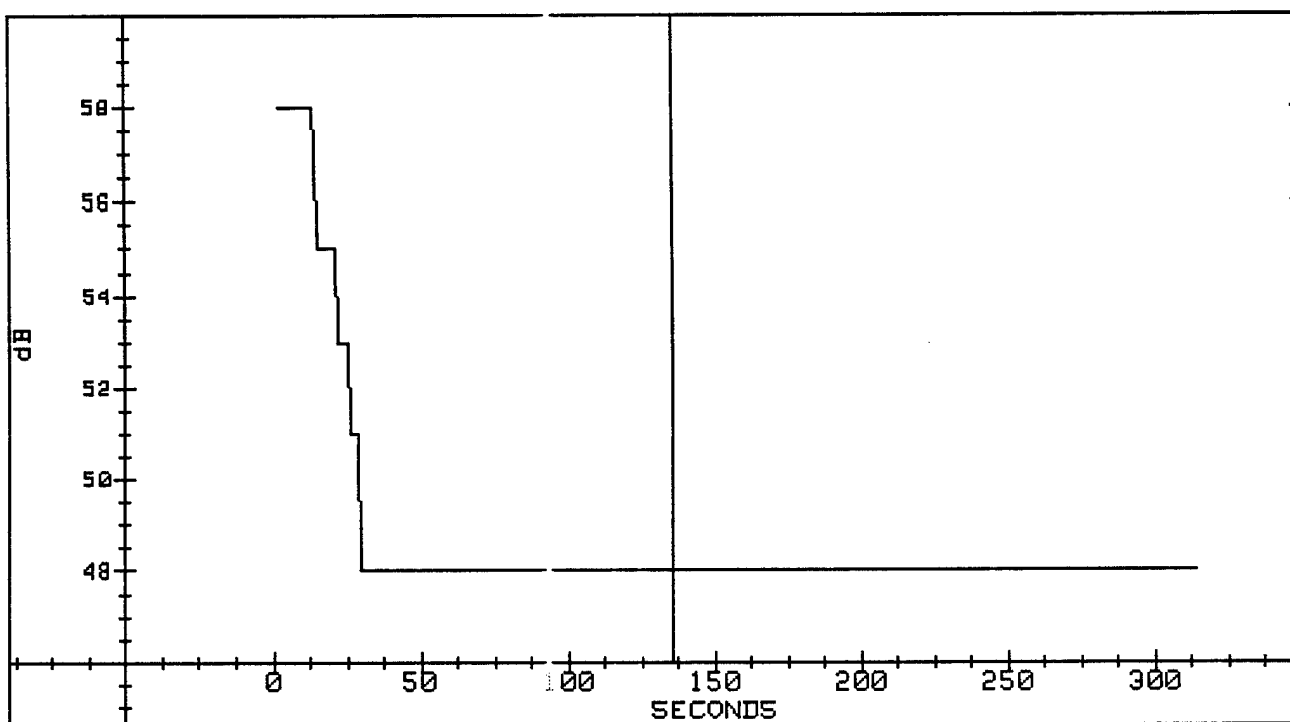
## GPS Vv

DAY 179 TIME 3:10 PASS 20 m= -1.760, sd= .050355



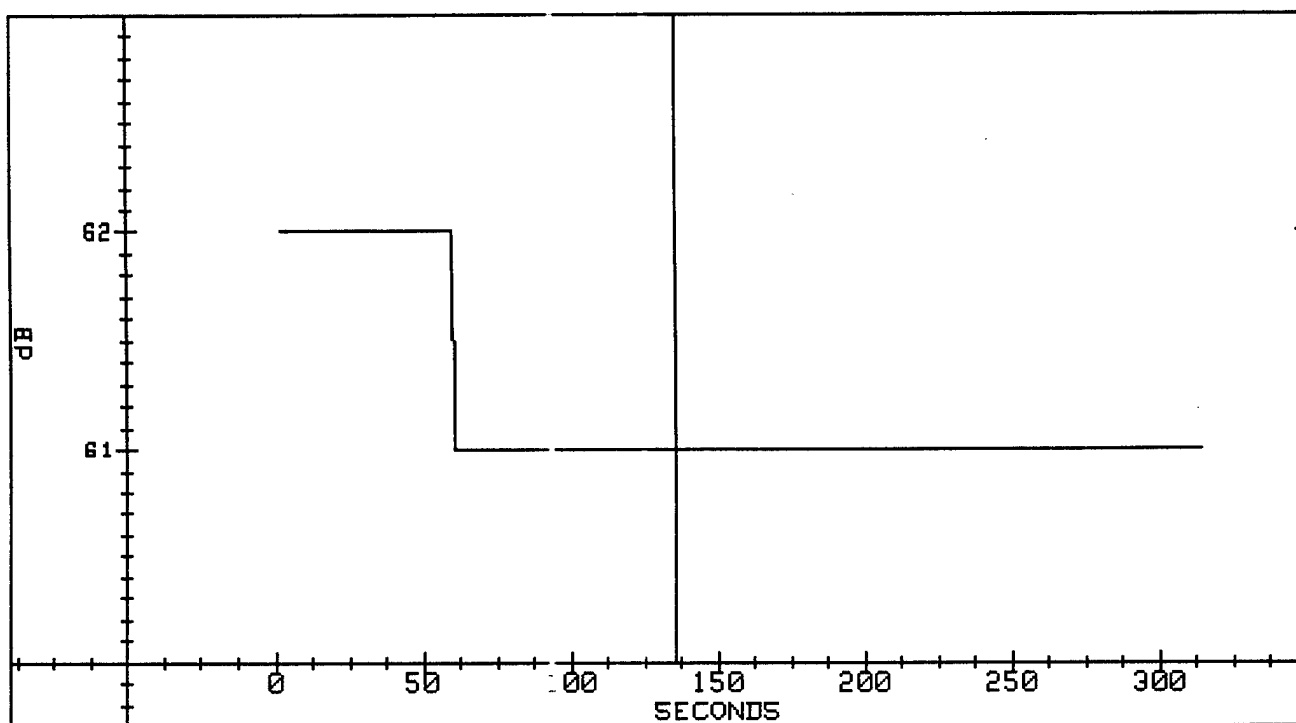
Ch1 RES Attenuation

DAY 179 TIME 3:10 PASS 20 m= 40, sd= 0



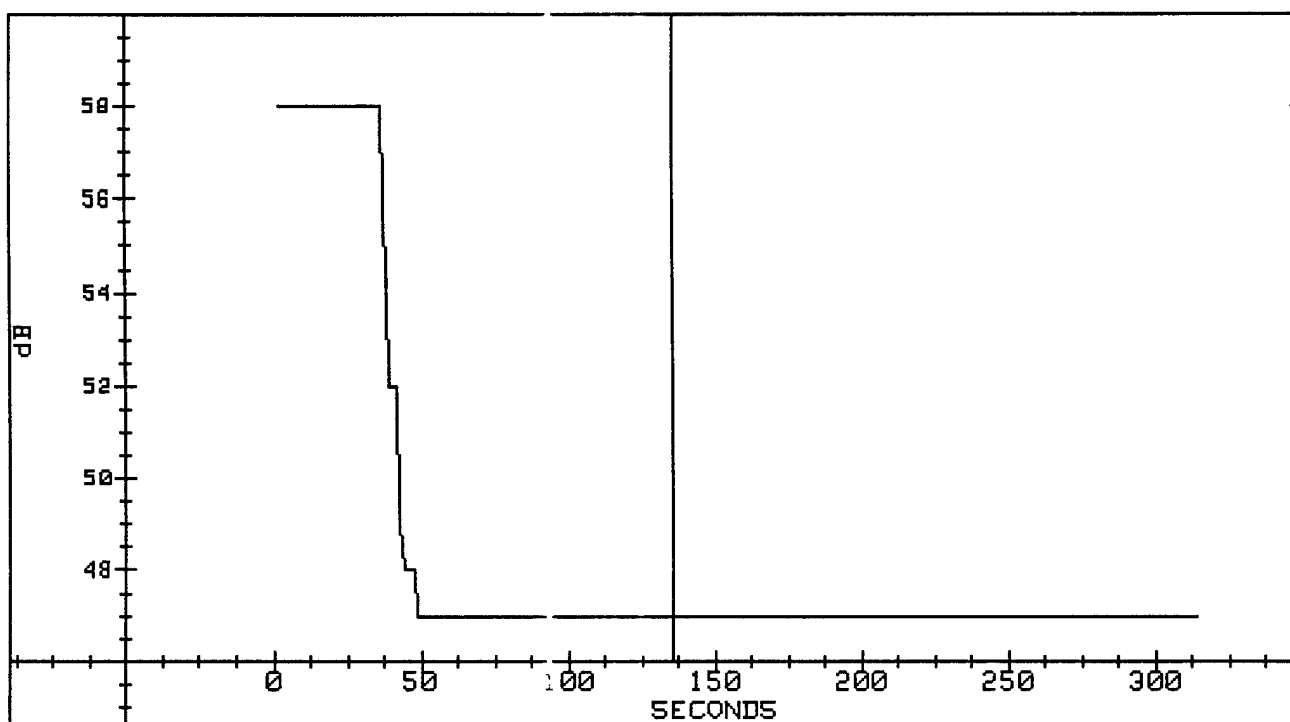
Ch2 RES Attenuation

DAY 179 TIME 3:10 PASS 20 m= 61, sd= 0



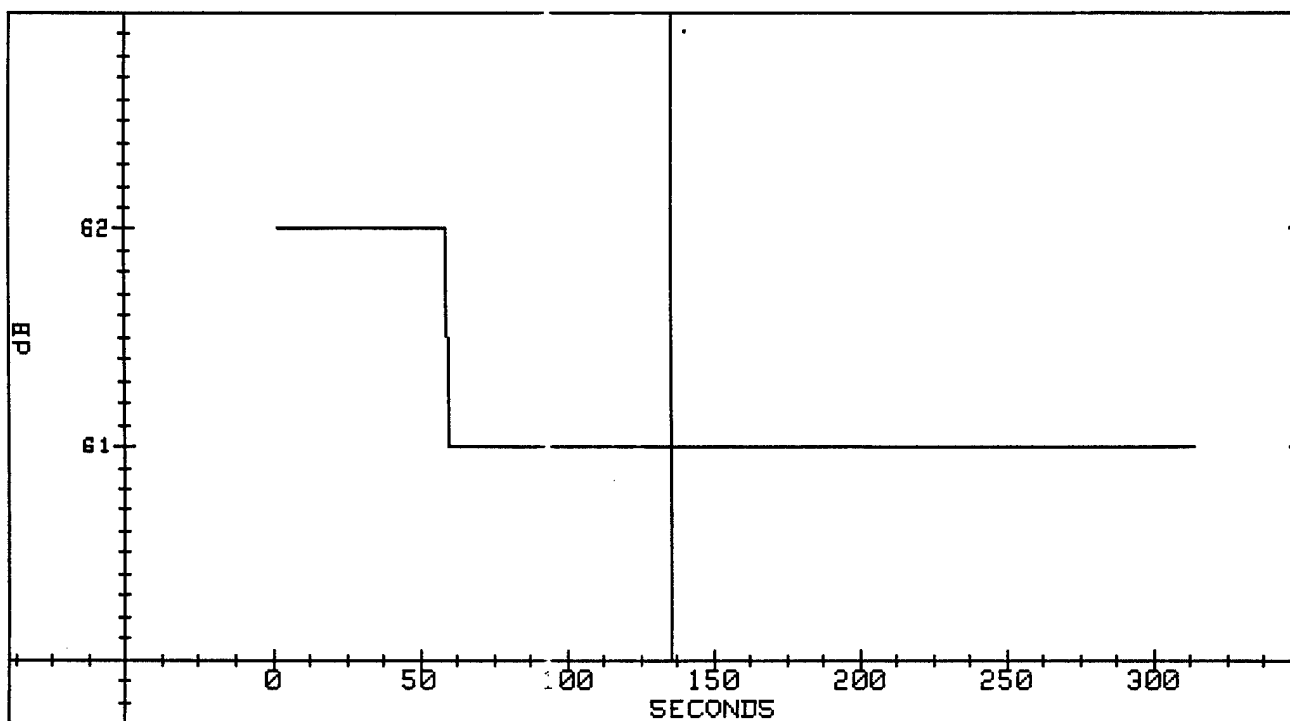
Ch3 RES Attenuation

DAY 179 TIME 3:10 PASS 20 m= 47, sd= 0



Ch4 RES Attenuation

DAY 179 TIME 3:10 PASS 20 m= 61, sd= 0

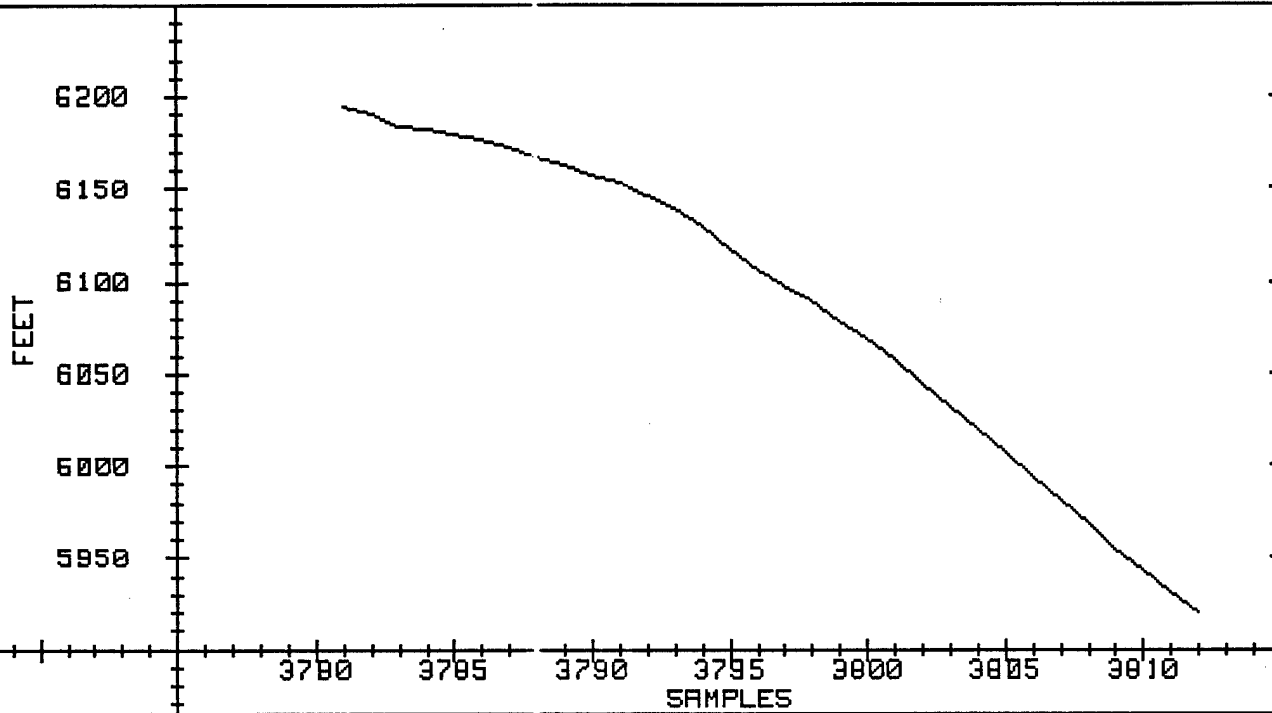


GPS ALTITUDE

MEAN= 6085.84      STANDARD DEVIATION= 86.0207

DATE: June 27, 1995      PASS 28

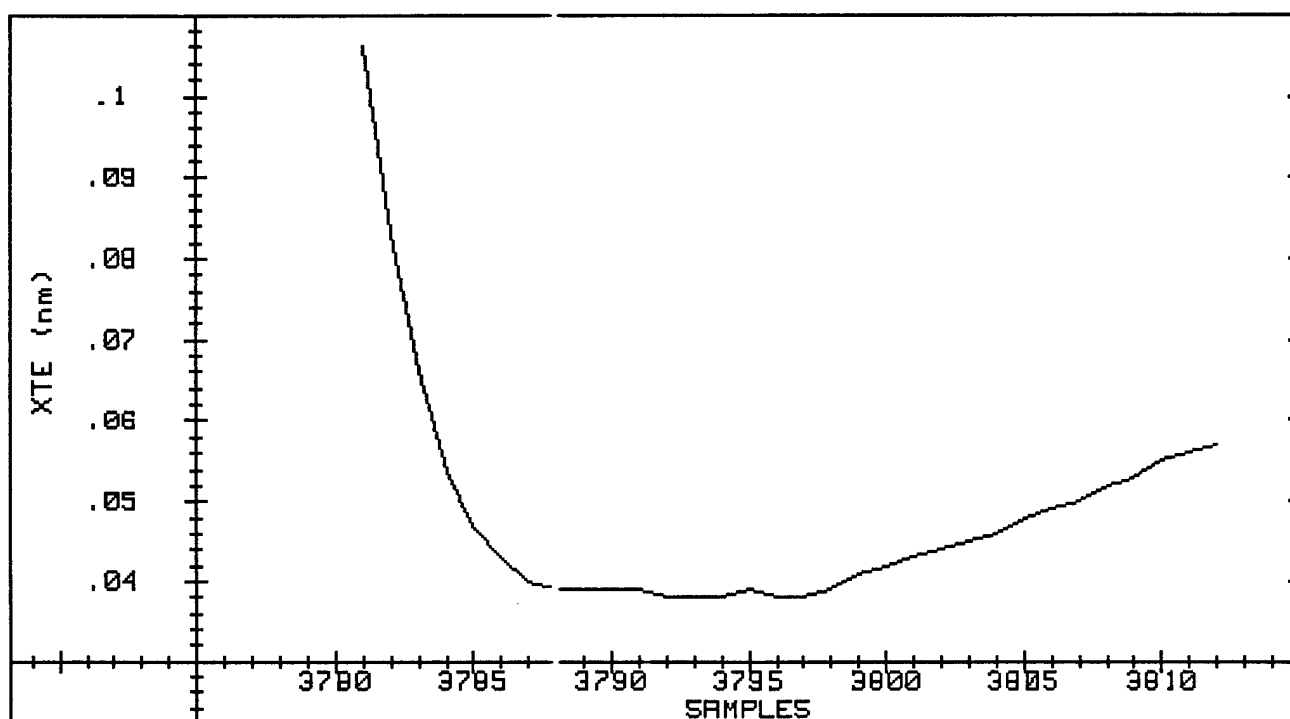
OFF  
ON  
BAR



GPS Cross Track Error

MEAN= .04825      STANDARD DEVIATION= .0141443

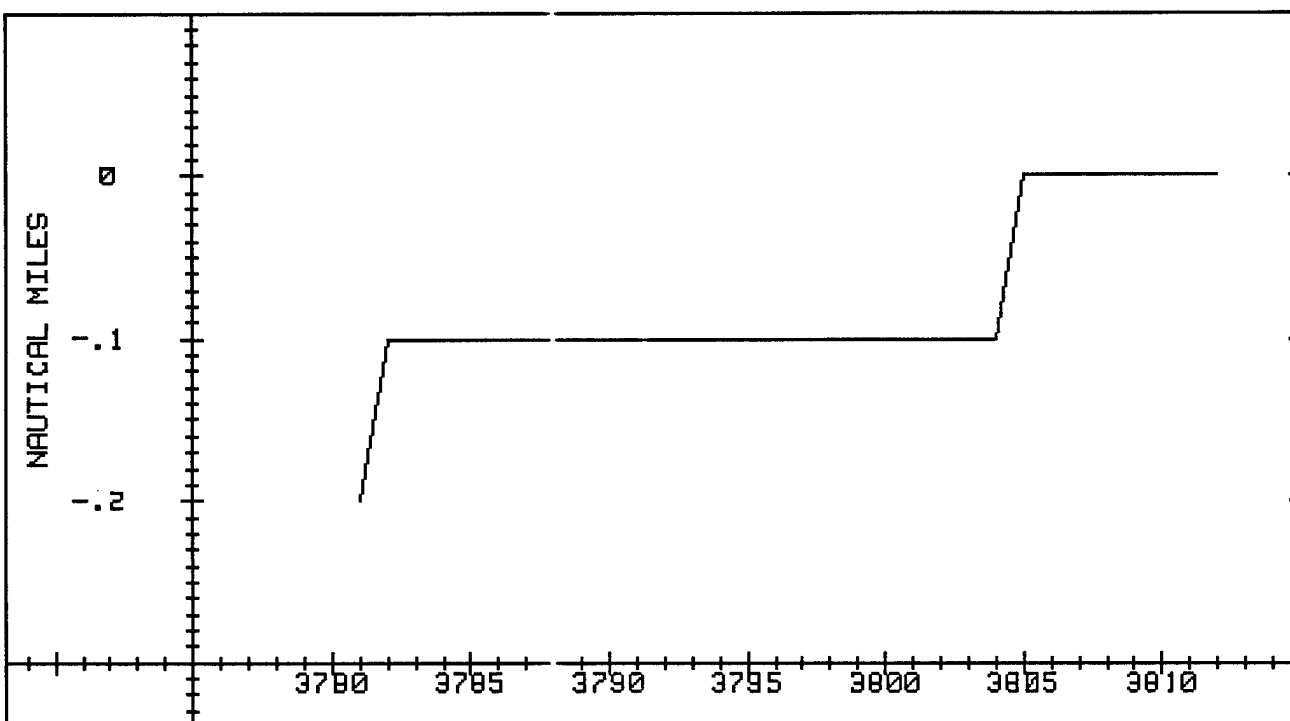
DATE: June 27, 1995      PASS 28



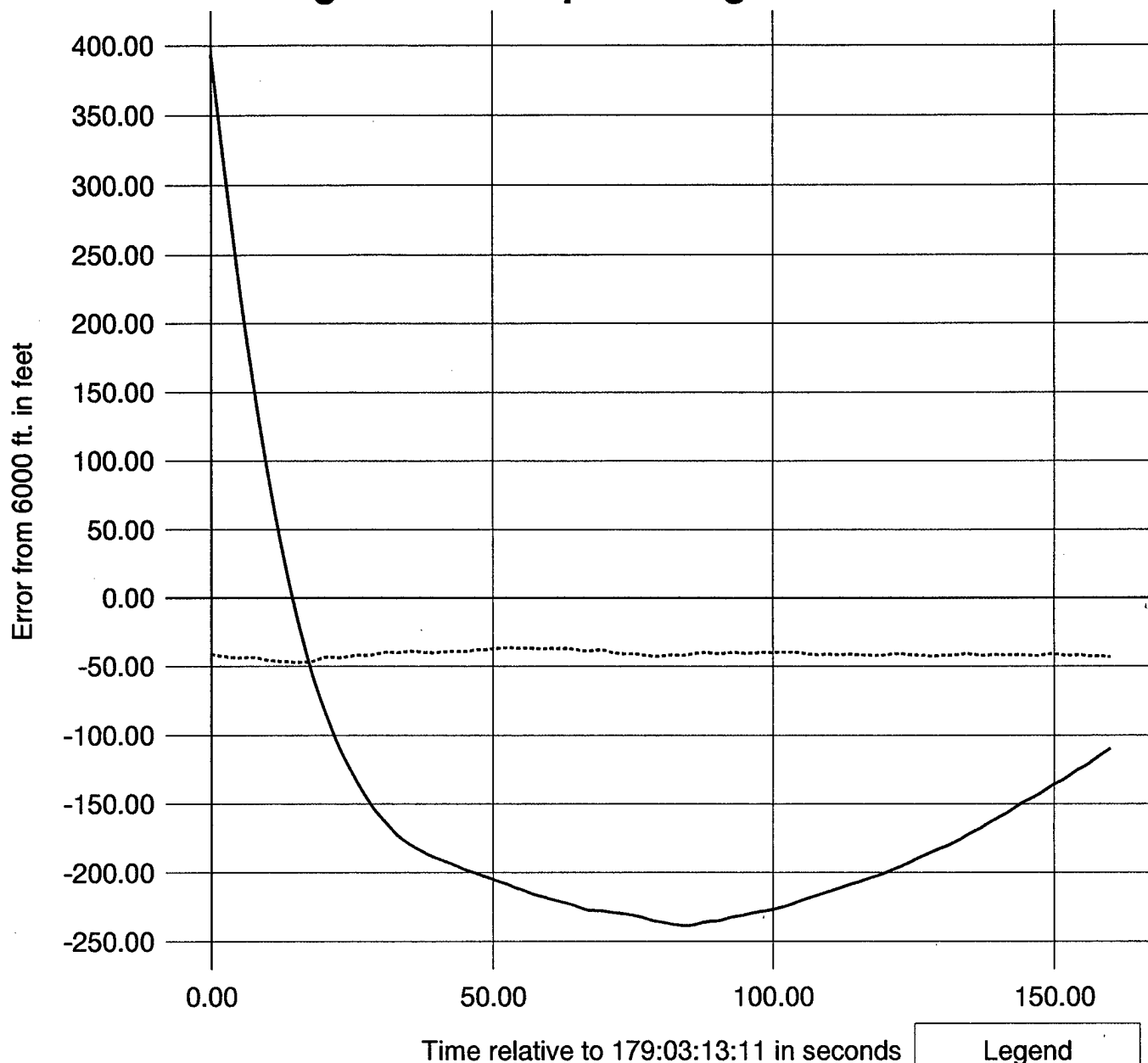
INS CROSS TRACK ERROR

MEAN- -.078125 STANDARD DEVIATION- .0483113

DATE: June 27, 1995 PASS 28



# Portage, ME - June 27, 1995 - Pass 28 - Xtk. and Alt. Errors Higher alt. and port are greater than zero



	Mean	St. Dev.
ALT.	-41.03	2.27
XTK.	-153.59	119.91

Legend	
—	P5-xt
.....	P5-alt

28 Jun 1995  
Tape: E1442

Post-line Data Sheet  
Line 49  
Mission: Presque Isle DAY 3

Time: 179:03:24:16  
Pass 29  
Req.# 26

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	5961 ft s.d.=	3 Swath Ctr Ang:	15.0°	15.0°	15.0°	15.0°
Slt. rng:	20091 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	18556	18556	18556	18556
Depr Ang:	25.0°	Near Rng Dep:	18.7°	18.7°	18.7°	18.7°
Des. trk:	276.0°	Far Rng Dep:	9.9°	9.9°	9.9°	9.9°
Start Sq:	90.0°	Atten (dB):	60.0	63.0	60.0	63.0
End Sq:	90.0°	RMS Video (%FS)	7.1	8.8	5.4	9.6

#### WAYPOINTS

Line up:	N 46:39.29	W 68:04.91	Main Target:	CALCS
Start:	N 46:40.59	W 68:22.23	Mocomp Point:	
End:	N 46:41.63	W 68:36.69	Lat:	N 46:44.29
			Long:	W 68:28.98
From:	N 42:35.05	W 45:46.39	Tgt Trk:	0.0
To:	N 45:52.31	W 92:35.10	Tgt Vel:	0.0
			Alt:	800.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	->	10 sec	
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)		
Swath width:	Single	Ave Gndspd:	Real	->	249.2 kts
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4		
Position Reference:	ON	GPS Vel/Pos Reference			
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft		
Range Gate Delta:	0.0 ft	Range Tracking is	OFF		
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF		
TX Chirp Filename:	CTLU2B	RX Chirp Filename:	CRL1N0A		

Ave Ref Vel -> 2.2 fps (s.d.= 4.3)  
Ave Fil Vel -> 3.5 fps (s.d.= 4.1)

NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation: 0.0°	Starting: 200 ft	(2)
L: -70.0	Azimuth: 0.0°	Ending: 1446 ft	(2)
C: -70.0	Pitch: 0.0°		
P: 39.8			

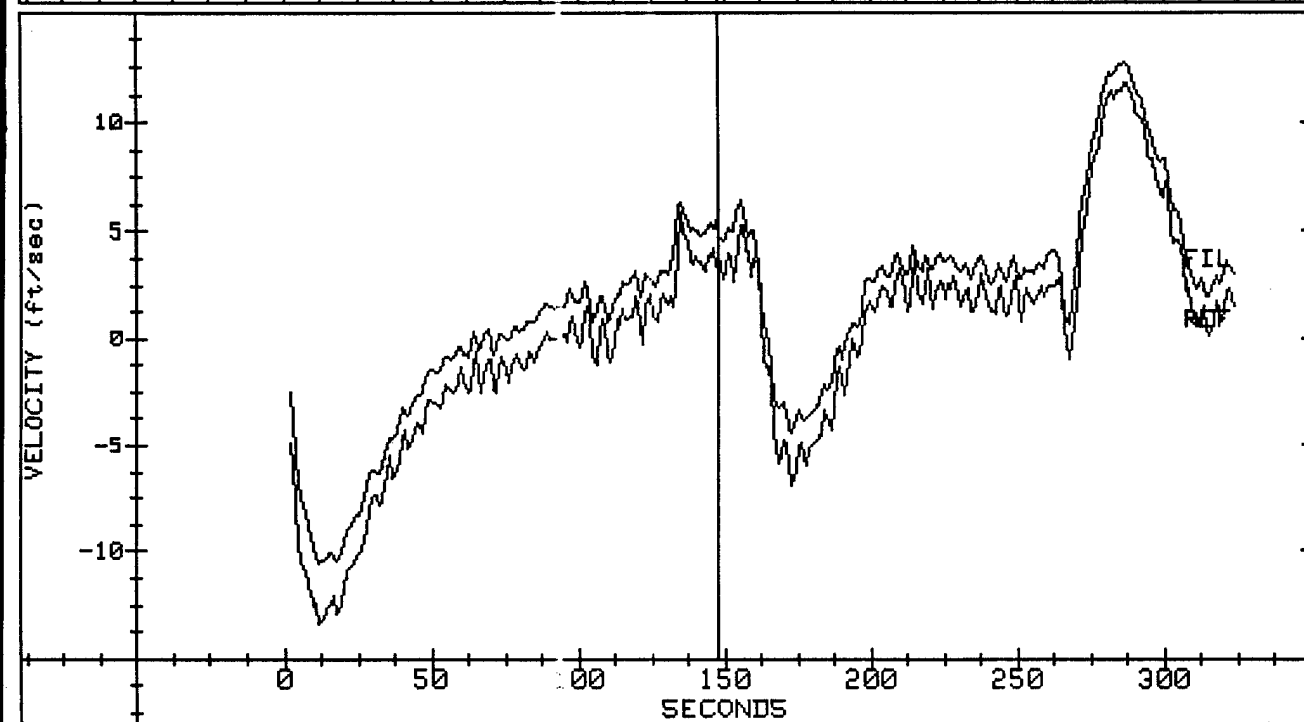
Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 2079.0	X: 63.8 dB	Start: 03:24:16
Y: 1867.0	L: 63.8 dB	End: 03:26:58
Z: 17142.0	C: 63.8 dB	

#### Mocomp Counters

Start:	1670511	00197D6Fh	CPA (UCT):	00:00:00
End:	1697661	0019E77Dh	Alt:	0 ft (GPS)
			Lat:	N 0:00: 0
			Lon:	E 0:00: 0

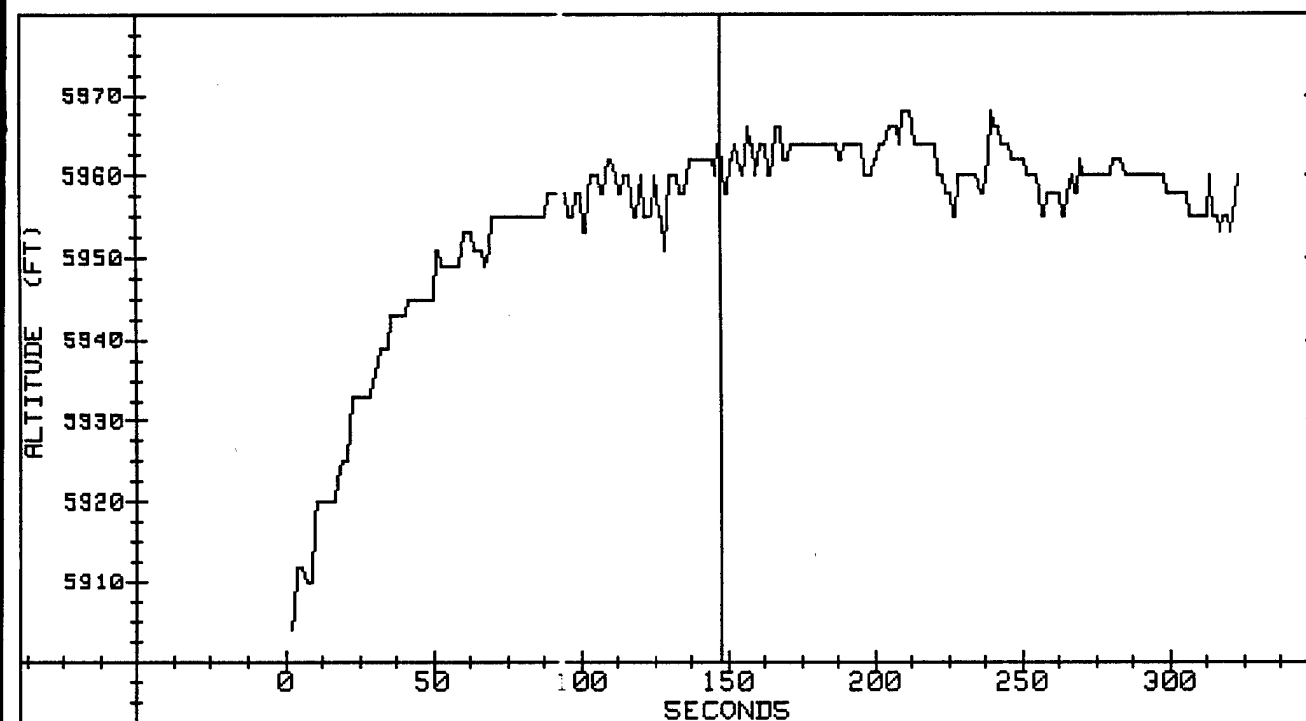
FILTERED vs. REF. VELOCITY  
DAY 179 TIME 3:21 PASS 29

INS  
LORAN  
GPS



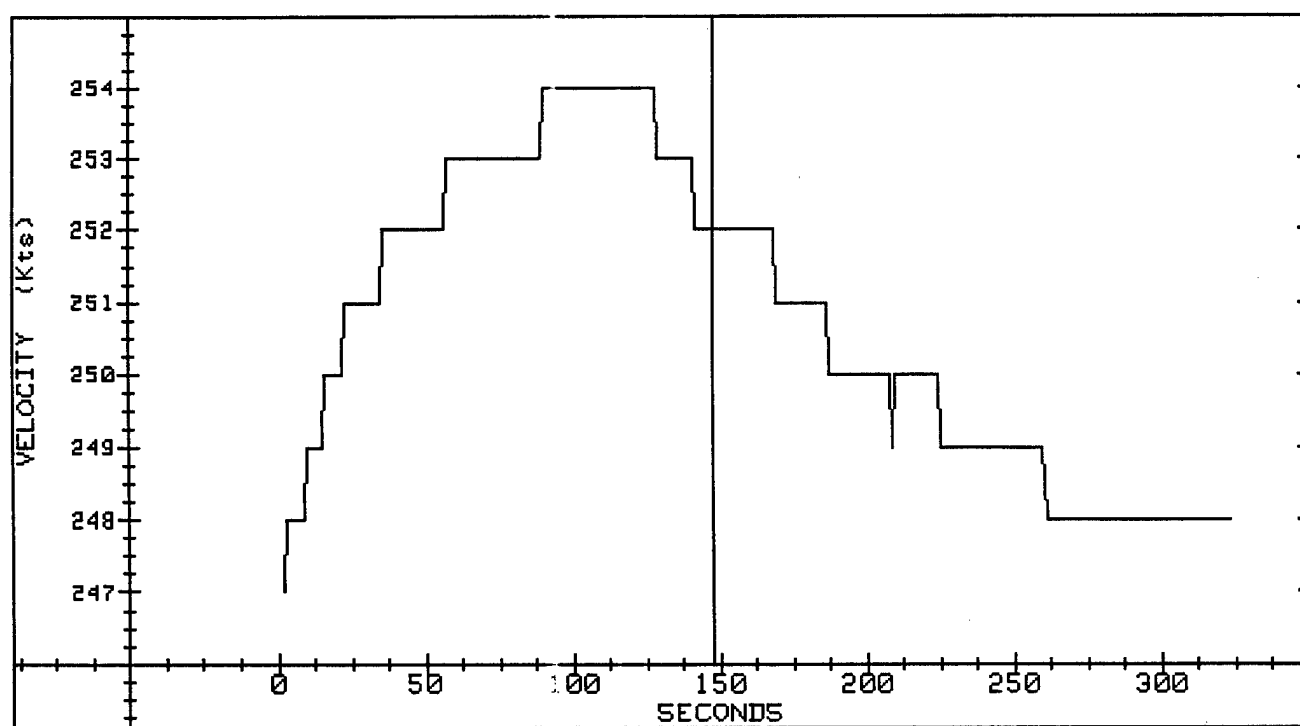
# BARO ALTITUDE

DAY 179 TIME 3:21 PASS 29 m= 5961. sd= 3.38751



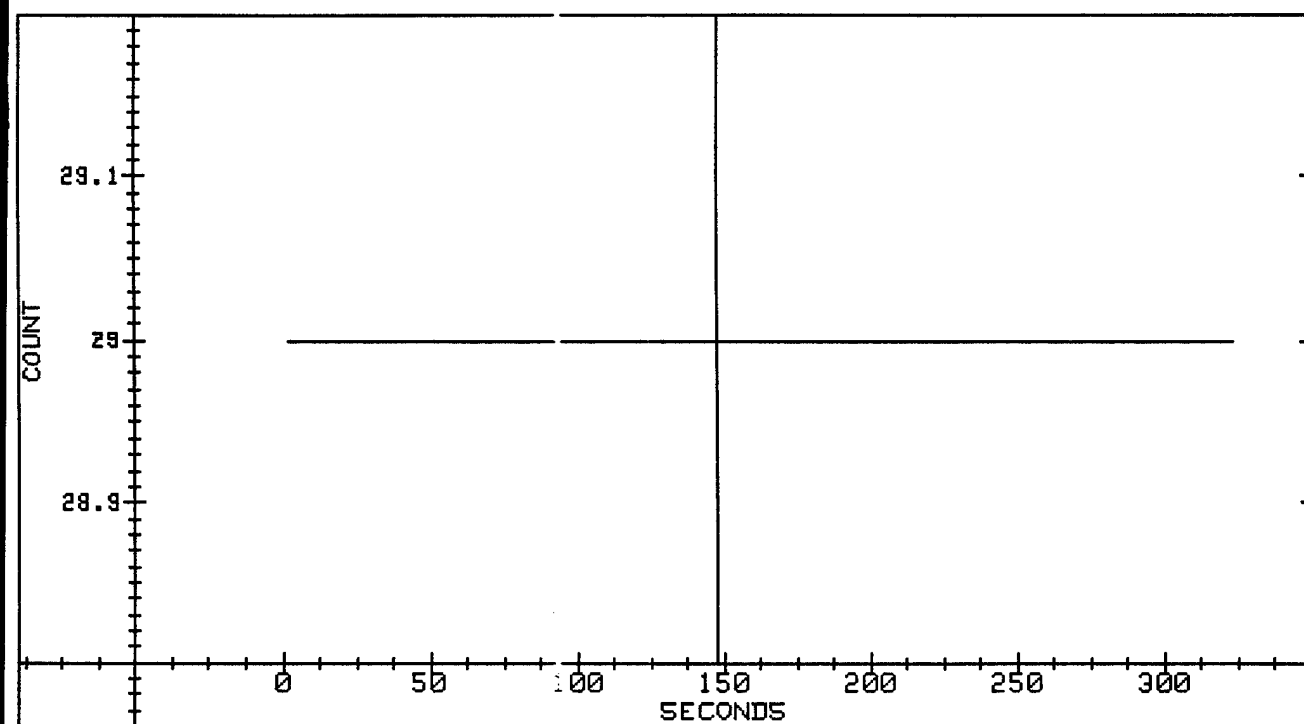
## INS GROUND SPEED

DAY 179 TIME 3:21 PASS 29 m= 249.2, sd= 1.20558



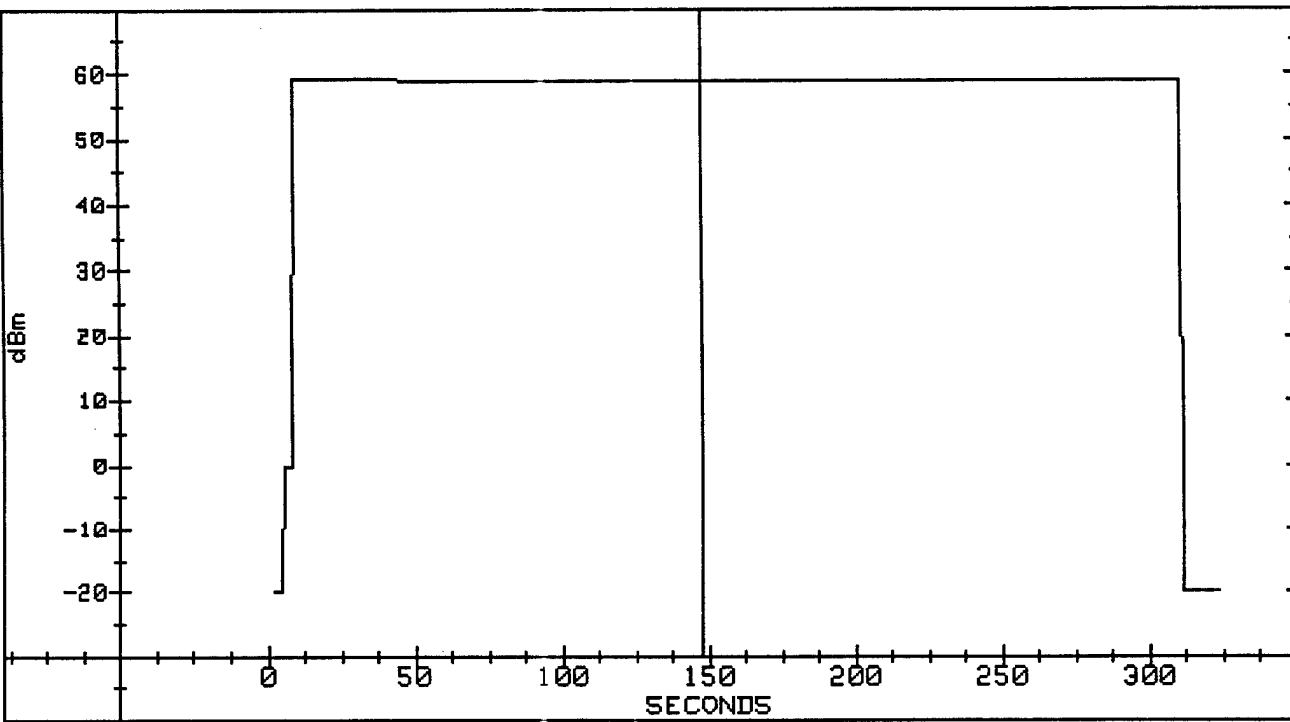
# PASS NUMBER

DAY 179 TIME 3:21 PASS 29 m= 29, sd= 0



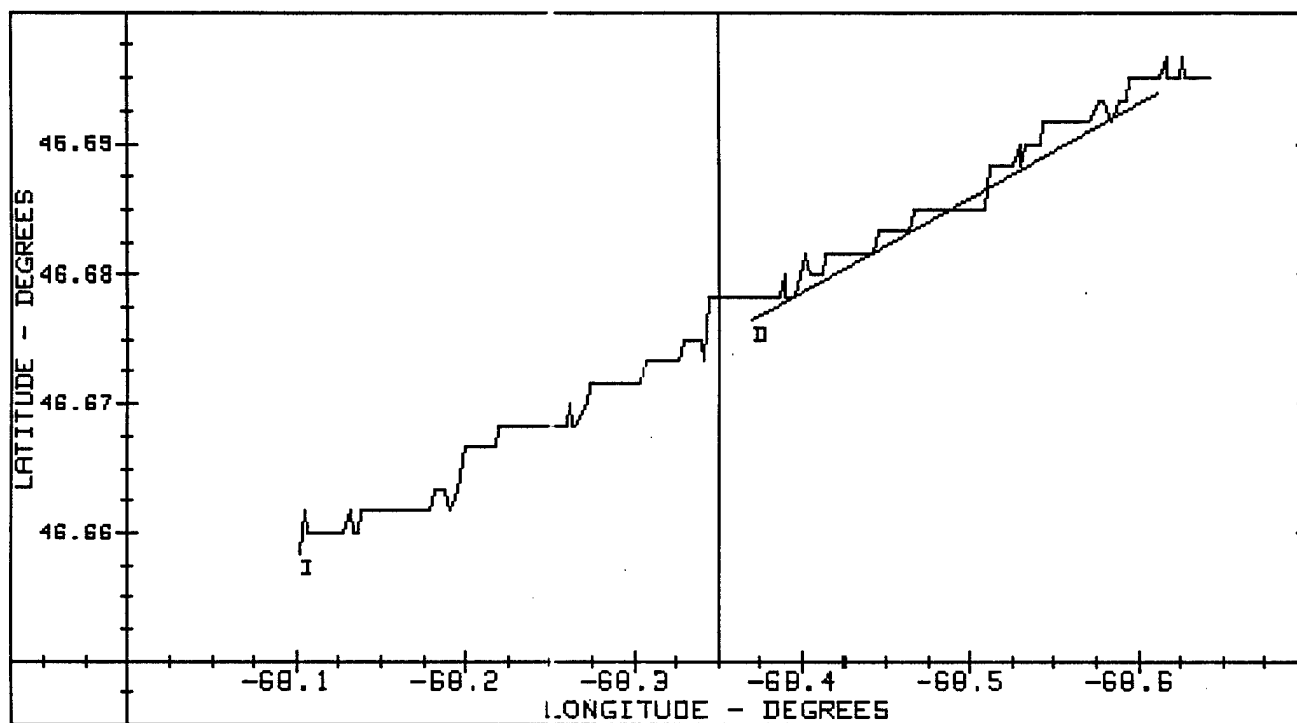
P Band Power

DAY 179 TIME 3:21 PASS 29 m= 52.55, sd= 21.359



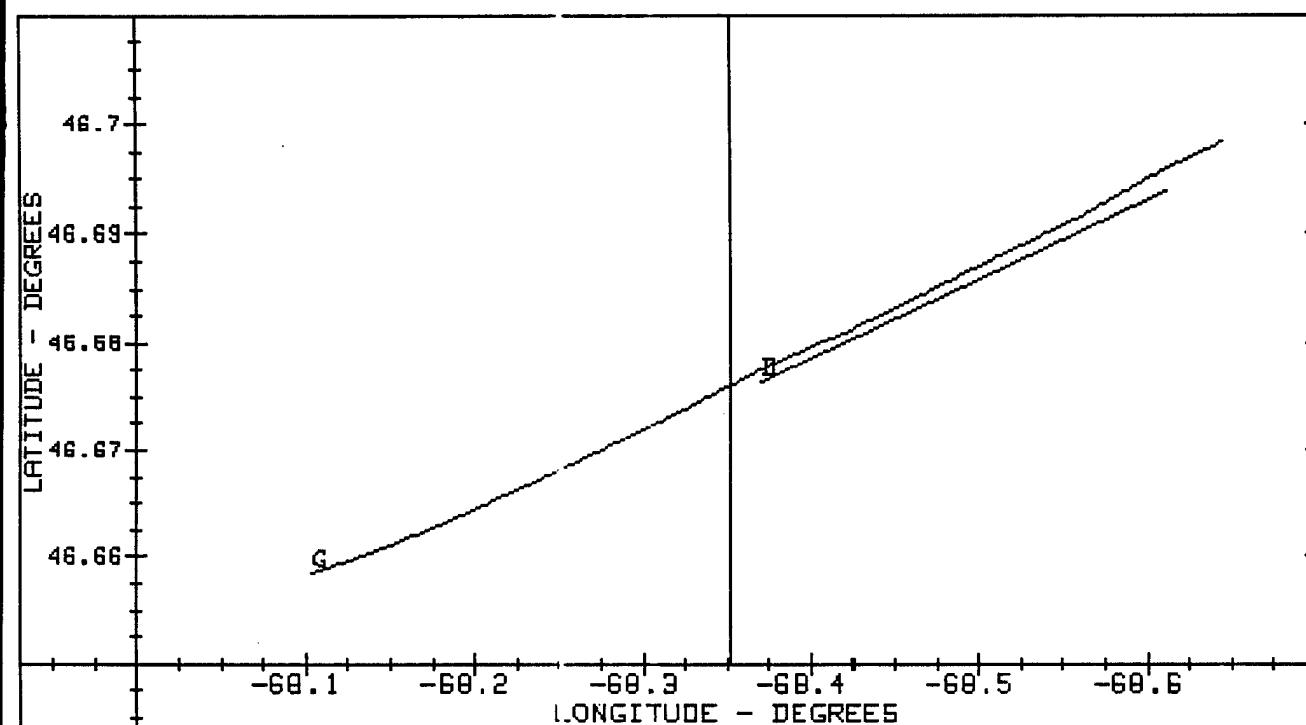
INS AIRCRAFT POSITION

DAY 179 TIME 9:21 PASS 29



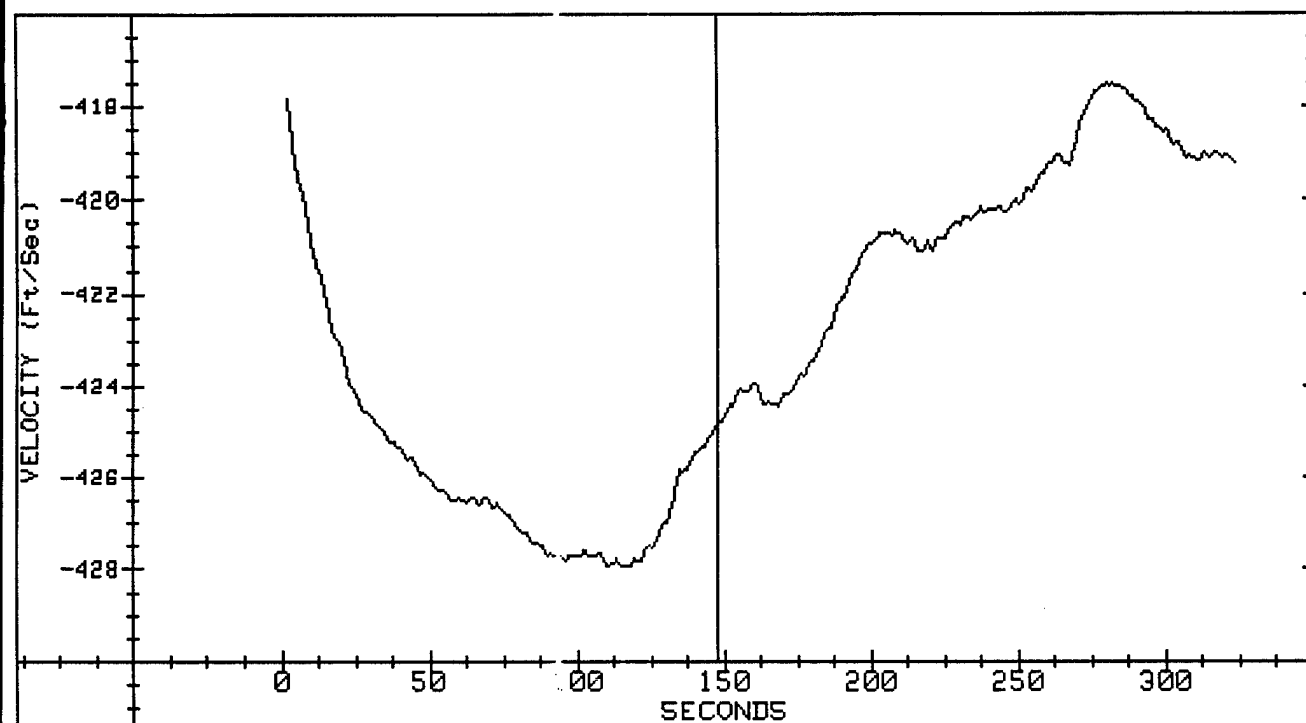
GPS AIRCRAFT POSITION

DAY 179 TIME 3:21 PASS 29



GPS V<sub>e</sub>

DAY 179 TIME 3:21 PASS 29 m= -420.3, sd= 1.919



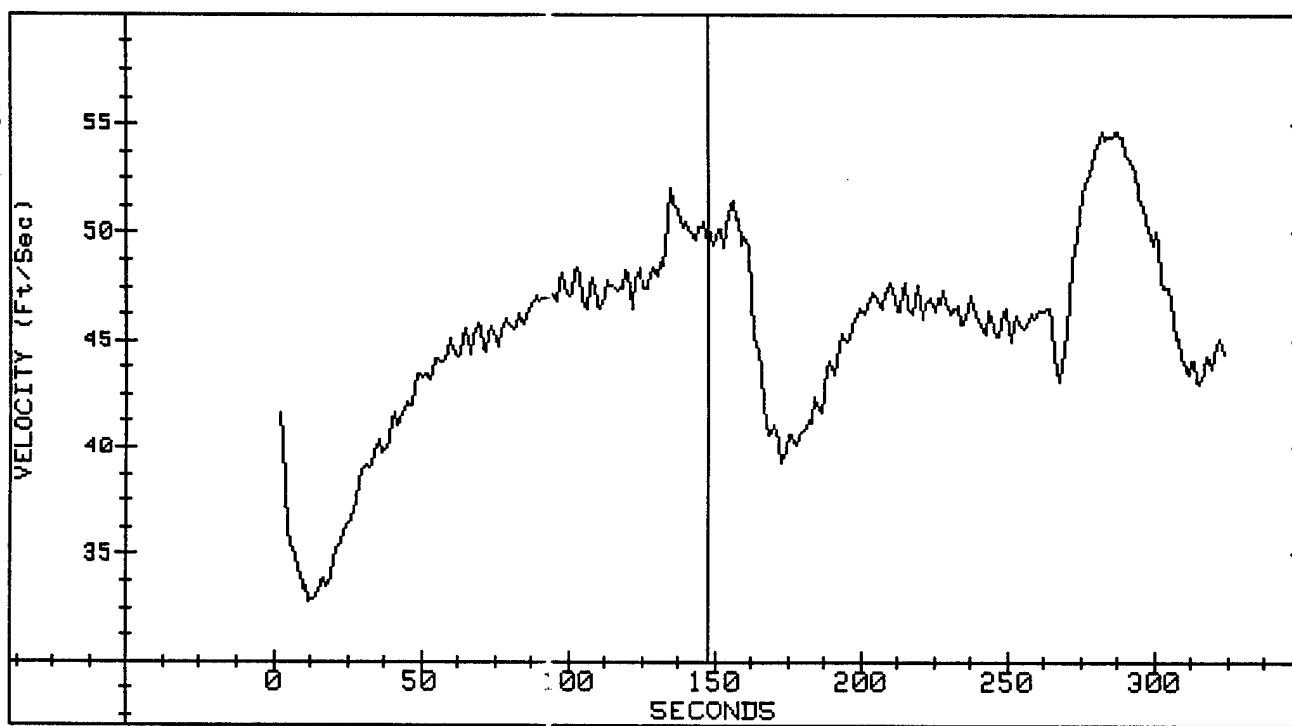
GPS Vn

DAY 179

TIME 3:21

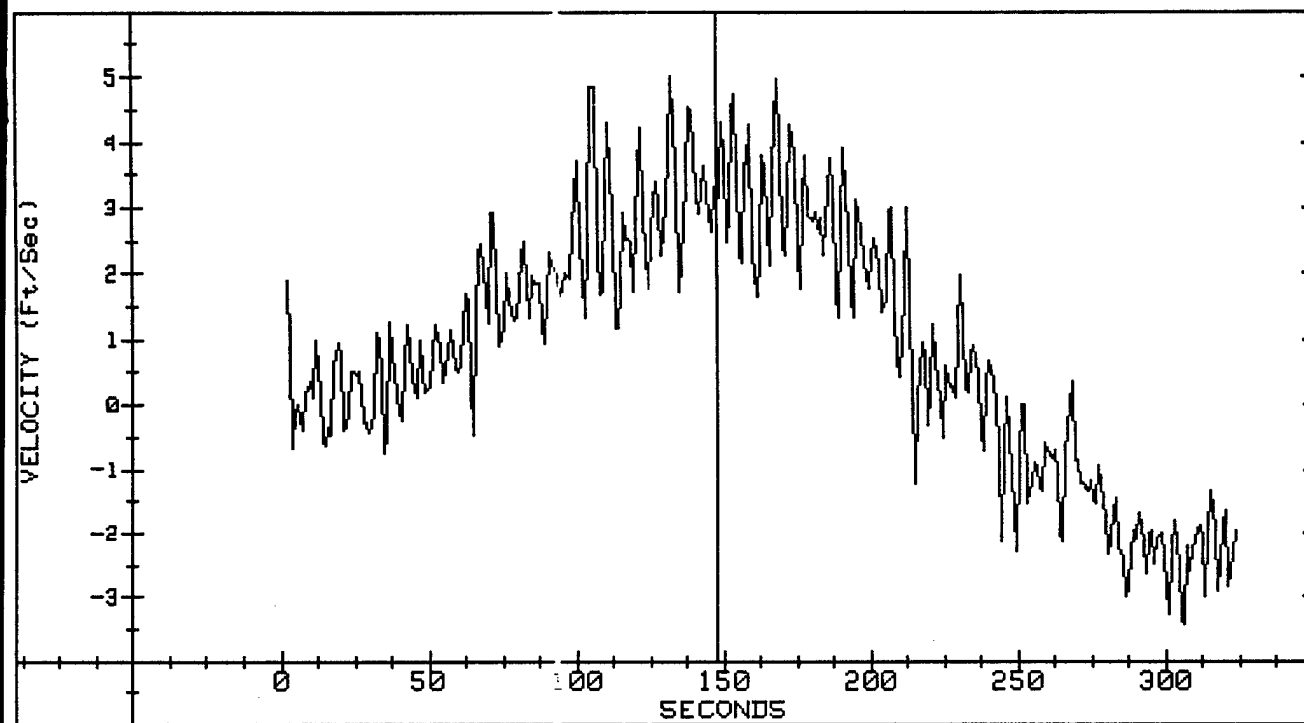
PASS 29

m= 46.41, sd= 3.54985



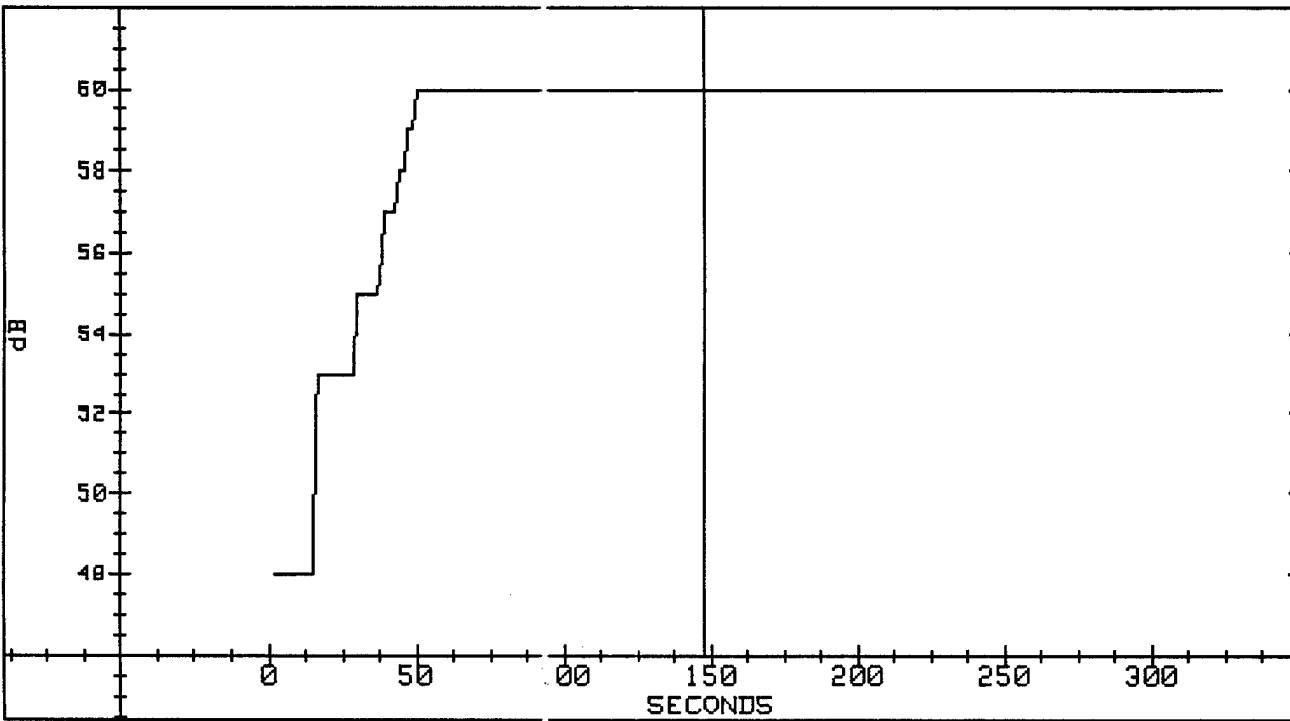
GPS Vv

DAY 179 TIME 3:21 PASS 29 m= .04946, sd= 2.07765



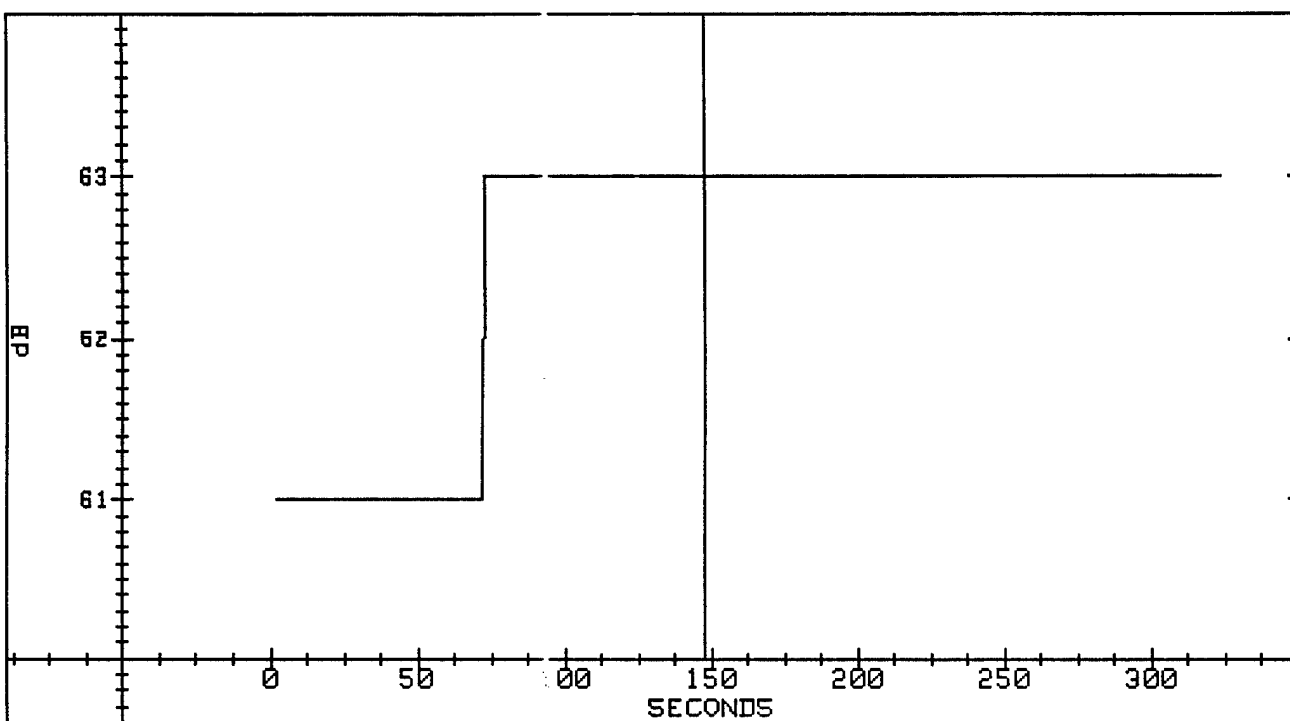
Ch1 RES Attenuation

DAY 179 TIME 3:21 PASS 29 m= 60, sd= 0



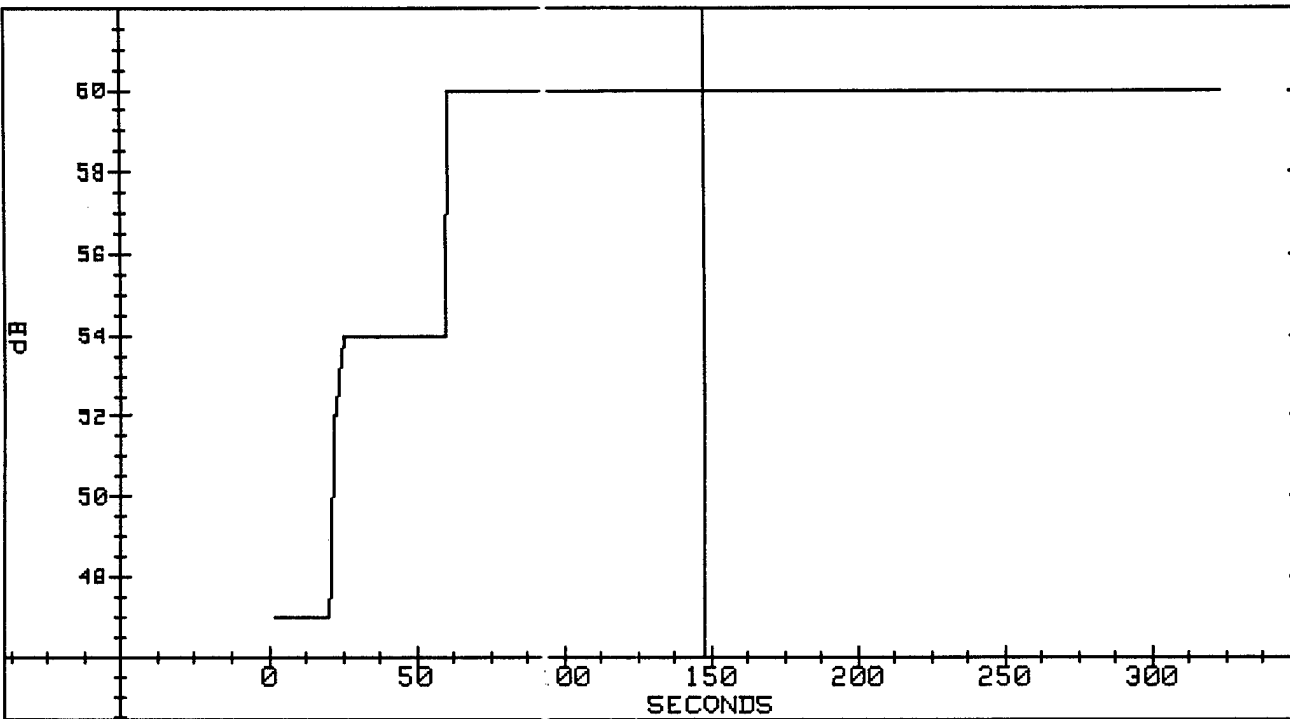
Ch2 RES Attenuation

DAY 179 TIME 3:21 PASS 29 m= 63, sd= 0



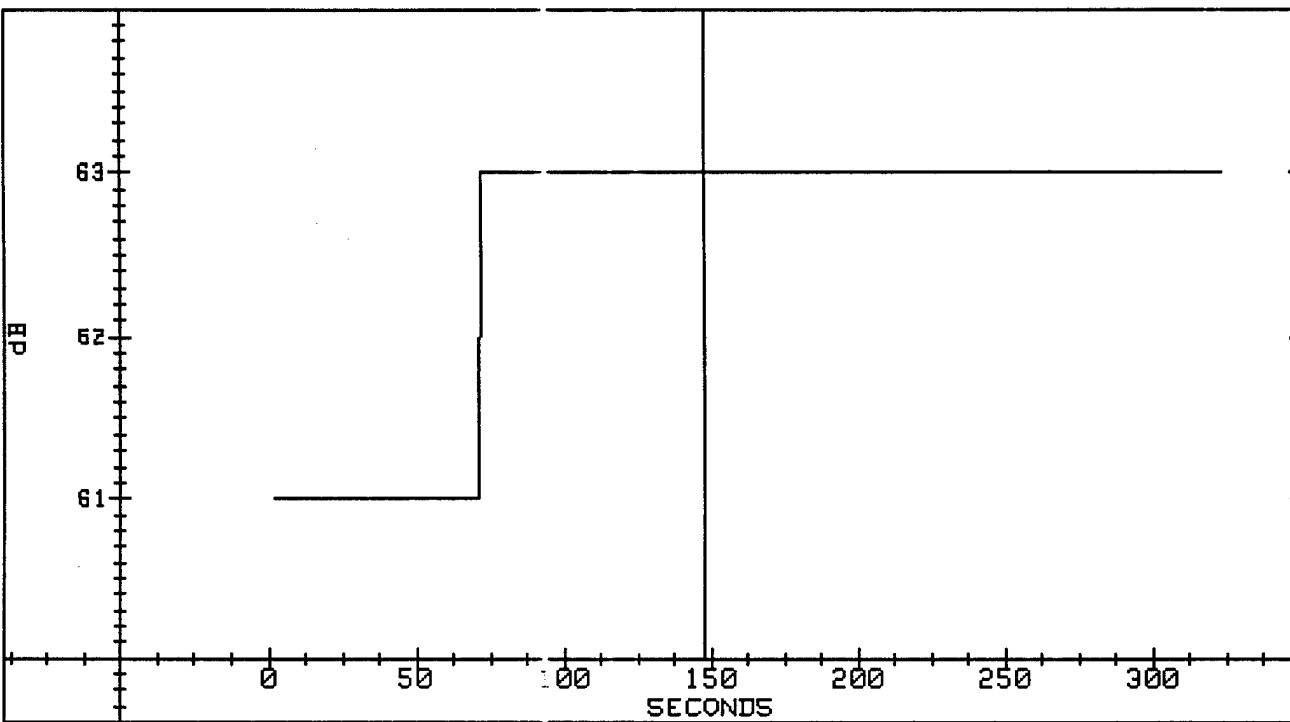
Ch3 RES Attenuation

DAY 179 TIME 3:21 PASS 29 m= 60, sd= 0



Ch4 RES Attenuation

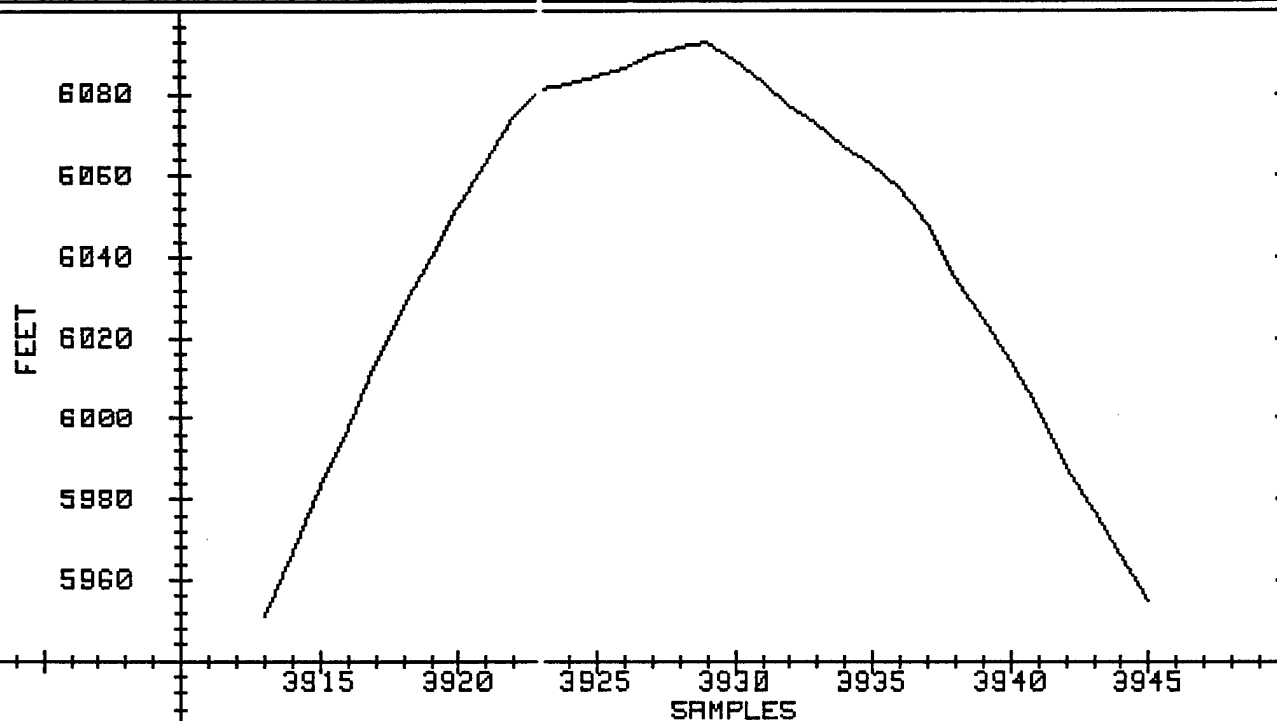
DAY 179 TIME 3:21 PASS 29 m= 63, sd= 0



## GPS ALTITUDE

MEAN= 6039.18 STANDARD DEVIATION= 44.7413

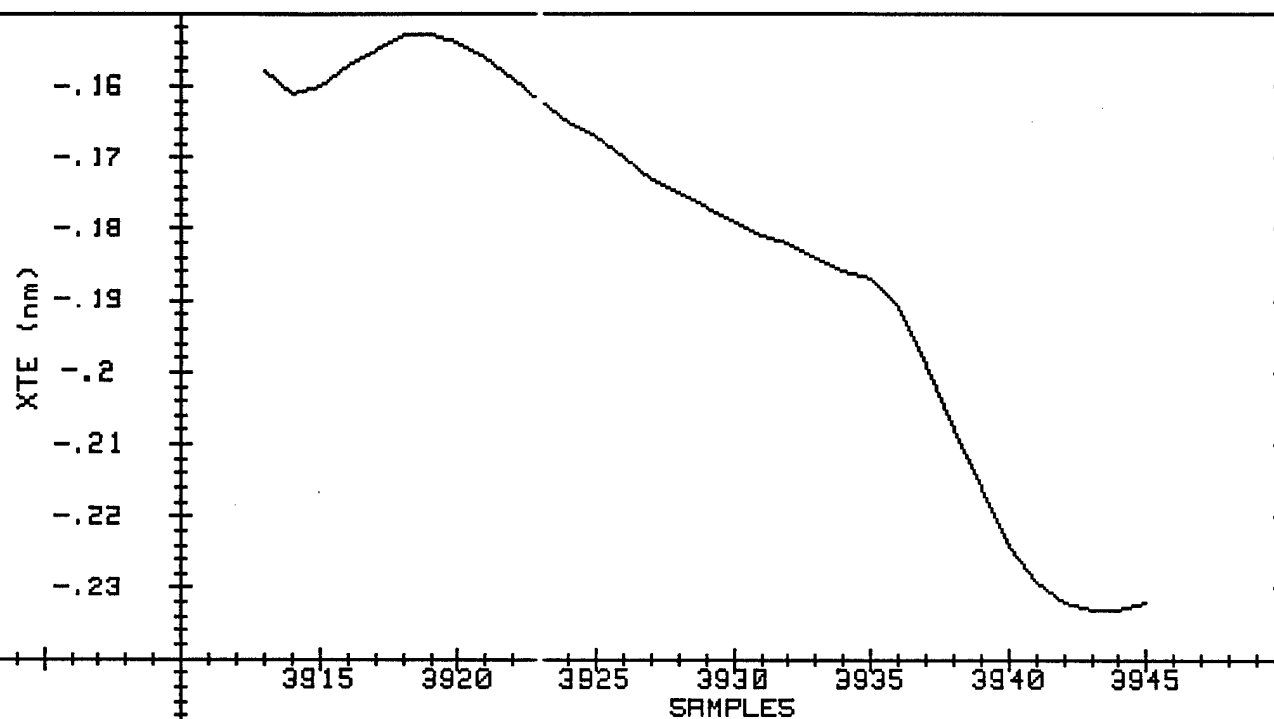
DATE: June 27, 1995 PASS 29

OFF  
ON  
BAR

GPS Cross Track Error

MEAN= -.183364 STANDARD DEVIATION= .0270295

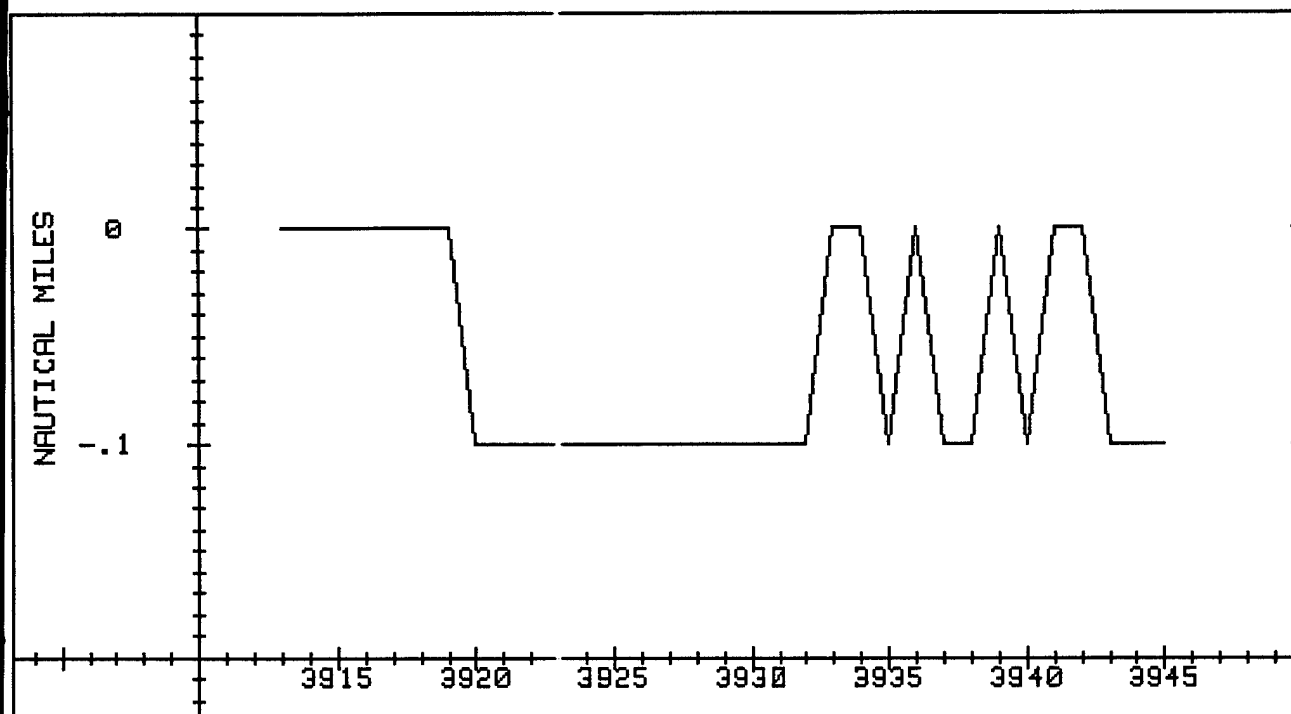
DATE: June 27, 1995 PASS 29



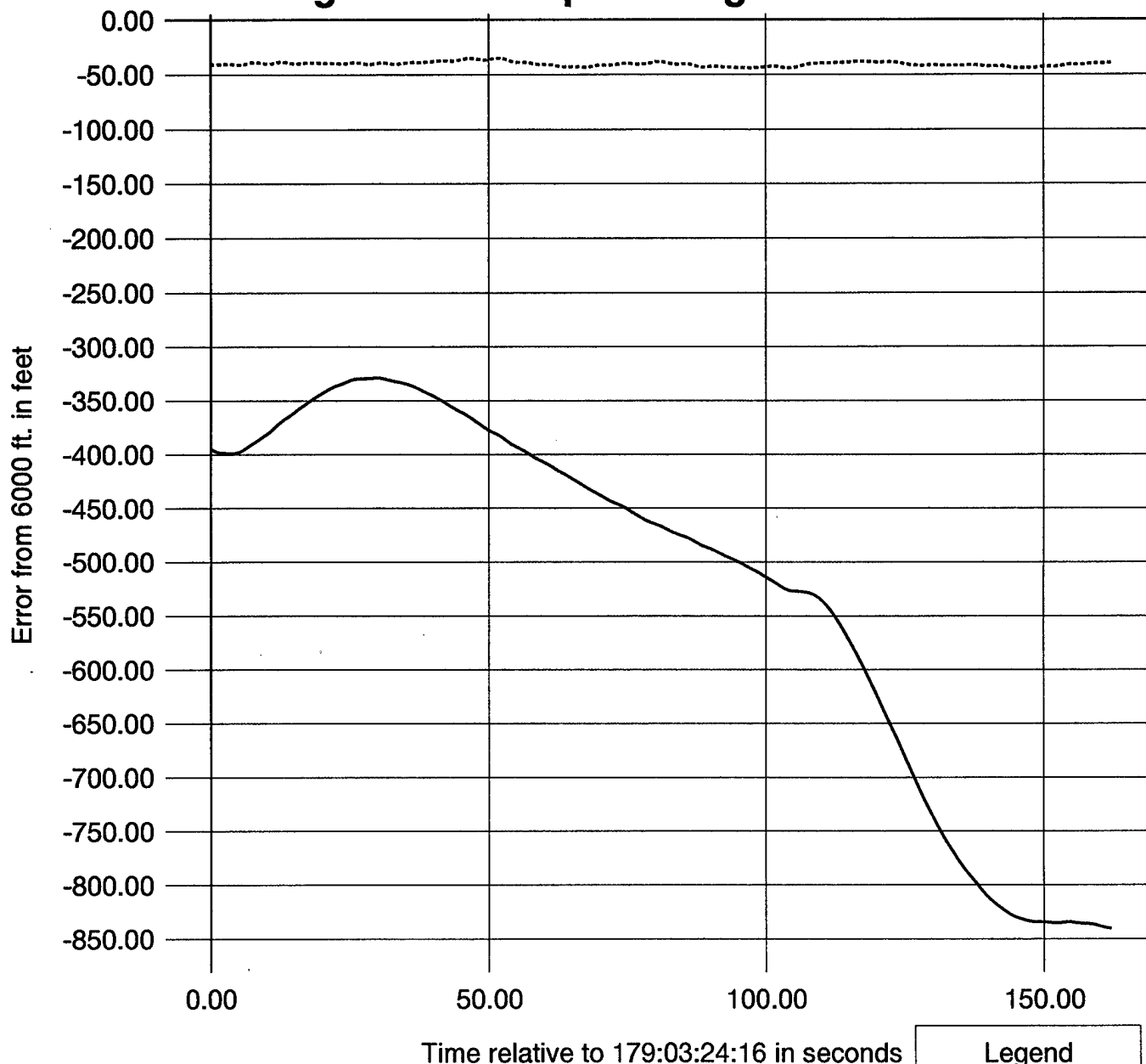
# INS CROSS TRACK ERROR

MEAN= -.0606061      STANDARD DEVIATION= .0488622

DATE: June 27, 1995      PASS 29



# **Portage, ME - June 27, 1995 - Pass 29 - Xtk. and Alt. Errors** **Higher alt. and port are greater than zero**



	Mean	St. Dev.
ALT.	-40.40	2.10
XTK.	-519.84	172.70

Legend	
—	P5-xt
.....	P5-alt